ATLAS
NURSES IN MENTAL HEALTH
2007

World Health Organization

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FOREWORD

Mental health care is an essential but often forgotten component of health care. Nurses are core health-care providers and they need to be able to contribute effectively to mental health care. In reality, however, most low and middle income countries do not have adequate numbers of nurses, and the education and training of nurses in these countries provide little of the knowledge and skills necessary for good mental health care. The result is poor or no mental health care for those who need it.

Atlas: Nurses in Mental Health 2007 presents results of a global survey on the availability, education, training and role of nurses in mental health care. The findings of this exercise, jointly conducted by the World Health Organization (WHO) and the International Council of Nurses, are significant though not entirely unexpected. The most consistent finding in the study is the severe shortage of nurses providing mental health care in most low and middle income countries. Lack of adequate opportunities for education and training in mental health during both initial nursing training and continuing education of nurses is also obvious from the results. In addition to the facts and figures included in the report, the respondents' comments and opinions highlight the barriers that prevent nurses from contributing more effectively to mental health care.

We know that people with mental disorders are stigmatized all over the world and that mental health services are far from satisfactory even in high income countries. Nurses can play a critical role in providing timely, effective and appropriate services to persons with mental disorders, and can also assist in safeguarding the human rights of their patients at treatment facilities and in society in general. Health systems within countries need to develop systematic plans to make this happen. National nursing associations can play a critical role in assisting the health planner in this task. WHO is also available to help with technical assistance.

If this Atlas is able to initiate some steps towards a more integrated response to the burden of mental disorders with the involvement of nursing profession, it will have served its purpose.

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PREFACE

Atlas: Nurses in Mental Health 2007 is the latest addition to the Atlas series of publications of the Department of Mental Health and Substance Abuse of the World Health Organization (WHO). Project Atlas is aimed at the collection, compilation and dissemination of relevant global information on mental health resources at national level. Although *Mental Health Atlas 2005* contains some basic information on mental health nurses, much more comprehensive information was needed in order to help low and middle income countries evaluate and improve the substantial role of nurses in mental health care. The present report attempts to fill this gap.

WHO has worked very closely with the International Council of Nurses (ICN) in collecting the information and preparing this new Atlas. This collaboration has drawn upon the complementary strengths and networks of the two organizations; the result is that information is available from 177 amongst Member States, areas or territories covering 98.5% of the world population.

The target readership of this Atlas includes policy-makers and planners in ministries of health and education, professionals in public health, mental health and nursing, and nongovernmental organizations interested and active in these areas. The Atlas may also be useful to students of public health, mental health and nursing.

We believe that the Atlas presents the best available information on the availability, education, training and roles of nurses in mental health globally; however, the information is neither complete nor error free. The Atlas project is an ongoing activity of WHO and we welcome all suggestions to improve the quality and accuracy of the information.

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THE PROJECT TEAM AND PARTNERS

The *Atlas: Nurses in Mental Health 2007* is a project of the World Health Organization (WHO) headquarters (Geneva) and the International Council of Nurses (ICN). The project was initiated and supervised by Shekhar Saxena and coordinated by Thomas Barrett. Jean Yan helped to direct the project and coordinated this effort with the Regional Advisers on Nursing. Tesfamicael Ghebrehiwet also helped to direct the project and was the primary contact with ICN members in countries. Marco Garrido-Cumbrera was responsible for completion of the data collection, data analyses and overall project management. Benedetto Saraceno provided vision and guidance to this project.

Key collaborators from WHO regional offices include many who have assisted in obtaining and validating the data and who have reviewed the written report.

Regional Advisers for Mental Health: Thérèse Agossou, Regional Office for Africa; Jose Miguel Caldas-Almeida, Itzhak Levav and Jorge Rodriguez, Regional Office for the Americas; Vijay Chandra, Regional Office for South-East Asia; Matthijs Muijen, Regional Office for Europe; Mohammad Taghi Yasamy, Regional Office for the Eastern Mediterranean; and Xiangdong Wang, Regional Office for the Western Pacific.

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Thanks also to those who provided support for this project; Ministries of Health, National Nurses Associations, Non-governmental Organizations (NGOs) and Universities. A special appreciation to all the respondents who worked diligently to collect and report this information (a list of all respondents can be found in appendix 1, at the end of the report).

Others key collaborators include Genevieve I. Gray, who provided substantial support in identifying and contacting many of the article authors; and Yohannes Kinfu, officer of WHO's Department of Human Resources for Health, who provided support regarding the chapter on health workers and nurses in health settings.

External reviewers of the report included Isabel Mendes, Seamus Cowman, Wipada Kunaviktikul and Kim Usher who provided substantial comments on the written report.

Administrative support was provided by Marisol García (ICN) and Rosemary Westermeyer (WHO). Editorial assistance was provided by Barbara Campanini and design and layout was carried out by e-BookServices.com.

EXECUTIVE SUMMARY

The World Health Organization (WHO) and the International Council of Nurses (ICN) collaborated on this project to collect data and report on mental health nursing in countries around the world. Even though mental health nursing is a critical issue for most countries, there is very little published information available. To the best of our knowledge, there are no published estimates of the numbers of nurses in mental health settings nor is there any information about the quantity or quality of mental health training for nurses. This lack of information is particularly problematic for low and middle income countries, as nurses are often the primary providers of care for people with mental disorders in these countries.

In late 2004, representatives from WHO's Department of Mental Health and Substance Abuse and the Office for Nursing and Midwifery, and ICN formed a work group to begin planning data collection for an *Atlas: Nurses in Mental Health 2007* around the world. The work group developed a plan for collecting data from countries using a standardized questionnaire. The questionnaire was developed and piloted in three countries, after which it was distributed to all WHO Member States and some related areas or territories using ICN member contact information.

The original questionnaire was made available in six languages. After the questionnaires were distributed, a systematic strategy was used by WHO and ICN staff to follow up all prospective respondents in order to maximize the response rate. In total, 177 completed questionnaires were returned. These questionnaires came from 171 Member States of WHO, 1 Associate Member of WHO (Tokelau) and 5 areas or territories (American Samoa, Bermuda, British Virgins Islands, China - Hong Kong Special Administrative Region, and Montserrat). These areas or territories are not WHO Member States but are ICN members.

The percentage of completed questionnaires by WHO region is as follows: Africa 100%, the Americas 83%, South-East Asia 91%, Europe 77%, Eastern Mediterranean 95% and Western Pacific 93%. Respondents came from a variety of institutions (ministries of health, nursing associations, regulatory bodies and universities) and backgrounds (nursing, mental health and general health). In order to minimize problems of validity and reliability, some survey data were cross-checked with existing information (e.g. total number of nurses by countries from *The World Health Report 2006*). Also, when necessary, additional information was solicited from the respondents.

The information was analysed using SPSS software. The data were categorized by income level (using World Bank country income categories) and by WHO region. The results are presented in graphs and maps.

In general, there are fewer mental health nurses per capita in low income countries, and the level of training in low and middle income countries is usually lower than in high income countries. There are also fewer community mental health facilities in low and middle income countries. However, nurses have more authority to initiate and renew medication prescriptions in countries in Africa, South-East Asia and the Western Pacific.

Comments in response to the open-ended questions also suggest that the overall nursing shortage is a factor in explaining insufficient numbers of nurses in mental health. Respondents say that this

shortage is even more acute for nurses in mental health because of the lack of incentives for nurses to be trained to provide mental health services. There are few financial incentives for nurses either to receive mental health training or to provide mental health services. The stigma of mental illness also contributes to this problem by limiting the number of nurses willing to make mental health nursing a career.

The recommendations included in this report are based on the survey data and a review of other available information.

1. Recognize nurses as essential human resources for mental health care

Nurses play a key role in the care of people with mental disorders; this role needs to be recognized and incorporated into the overall plans for mental health in all countries.

Nurses, with appropriate training, can perform a much wider variety of functions within mental health services than they are currently allotted. Nurses need to be able to provide mental health care in the community, as community services should be the most easily accessible form of care. The role of nurses ought to be expanded to incorporate assessment, clinical care and follow-up using psychosocial and pharmacological interventions. Nurses should be fully involved in the development of policy, plans and legislation and service programmes. These functions for nurses are even more important in countries where mental health professionals are scarce.

2. Ensure that adequate numbers of trained nurses are available to provide mental health care

There is a need for more nurses with appropriate mental health training in low and middle income countries. In most of these countries, the number of nurses with formal training in mental health is far less than the number of nurses working in mental health settings. In view of the severe scarcity of other mental health personnel in these countries, the role of nurses becomes even more critical.

3. Incorporate a mental health component into basic and post-basic nursing training

Mental health must be an essential ingredient of training for all nurses. Mental health training is a necessary prerequisite for the provision of mental health care, but is also important for a holistic approach to general nursing care. General nursing curricula need to be strengthened by incorporating appropriate mental health components.

INTRODUCTION

The World Health Organization (WHO) and the International Council of Nurses (ICN) collaborated on this project to collect data and report on mental health nursing in countries around the world. WHO's Department of Mental Health and Substance Abuse has produced a number of documents about the availability of resources and services for mental and neurological disorders (e.g. *Mental Health Atlas 2005, Atlas: Country Resources for Neurological Disorders 2004, Atlas: Child and Adolescent Mental Health Resources, Atlas: Epilepsy Care in the World 2005*). These documents have proven useful for countries in evaluating their current service systems and in developing plans for improvement.

Mental health nursing is a critical issue for most countries. Nurses in low and middle income countries are often the primary providers of care for people with mental disorders. These nurses have varying levels of training in mental health. Some are highly qualified mental health professionals and often train other providers in identifying and treating mental disorders. In other instances, however, nurses have had no mental health training and receive little or no support from mental health professionals. The lack of sufficient mental health professionals in most developing countries means that nurses without training are often the only providers available to care for people with mental disorders. These nurses often provide services in isolated settings with no hope of support from mental health professionals.

Nurses play a similarly critical role in delivering mental health services in high income countries. Primary health care staff provide the majority of mental health services in even the most developed countries, and nurses are the main providers in these health-care systems.

For all these reasons, it is important to provide some reliable information about nurses and mental health care. This report intends to begin this process, though much more work will be necessary before it will be possible to understand fully the complex issues involved in the very important issue of nurses and mental health.

METHODOLOGY

In late 2004, representatives from WHO's Department of Mental Health and Substance Abuse and the Office for WHO Nursing and Midwifery, and ICN formed a work group to begin planning data collection for an Atlas report on mental health nursing around the world. This work group agreed that nurses play a critical role in the provision of mental health services in most, if not all, countries. The work group also believed that information on mental health nursing is essential for countries in planning improvements in mental health services.

The work group developed a plan for collecting data from countries using a standardized questionnaire. The questionnaire was developed and piloted in three countries, after which it was distributed to ICN contacts in all WHO Member States and some related areas and territories. WHO also identified contacts in countries through the Regional Advisers for Mental Health and the Regional Advisers for Nursing and Midwifery, the Nursing Directors and the Mental Health Directors at the ministries of health, and the mental health counterparts in WHO country offices. In addition, WHO and ICN identified further respondents from the national nurse associations and from the ministries of health during two international nursing conferences held in Geneva during 2006.

The questionnaire was made available in six languages. The relevant language version was sent to respondents. The English version of the questionnaire can be found in appendix 2, at the end of the report. After the questionnaires were distributed, a systematic strategy was used by WHO and ICN staff to follow up all prospective respondents in order to maximize the response rate. If there was no response to the original request, another questionnaire was sent; if there was no response to the second attempt, additional contacts were identified. In a few instances, this process resulted in two completed questionnaires for the same country. When this happened, we asked the two respondents to resolve the differences (if any) and to send us a consolidated response.

Completed questionnaires were returned from 171 Member States of WHO plus one Associate Member of WHO (Tokelau). In addition, a further five completed questionnaires were received from territories and areas that are not WHO Member States but are ICN members. In total, the 177 responses are from countries representing 98.5 % of the world population. A list of all participating WHO Member States, areas or territories can be found in appendix 3, at the end of the report with reference to the corresponding WHO region and World Bank income categories.

The percentage of completed questionnaires by WHO region is as follows: Africa 100%, the Americas 83%, South-East Asia 91%, Europe 77%, Eastern Mediterranean 95%, and Western Pacific 93%.

Respondents came from a variety of institutions (ministries of health, nursing associations, regulatory bodies and universities) and backgrounds (nursing, mental health and general health). In order to minimize problems of validity and reliability, some survey data were cross-checked with existing information (e.g. health workers and nurses in health settings by countries from *The World Health Report 2006*). Also, when necessary, additional information was solicited from the respondents.

The information was analysed using SPSS software. The data were categorized by income level (using World Bank country income categories) and by WHO region. In most instances medians were used as the best indicator of central tendency as the distributions were highly skewed. Geographical Information System (GIS) software was used to represent the variables at country and regional level into maps.

Qualitative information is included in the report. This information, gleaned from several open-ended questions, is summarized in the section on responses to open-ended questions. Some of the comments are succinct summaries of the issues many countries are facing and are reproduced in their entirety.

The body of this report is divided into 11 broad themes:

- Health workers and nurses in health settings
- Nurses in mental health settings
- Nurses in mental hospitals
- Nurses in psychiatric units of general hospitals
- Nurses in community mental health
- Nurses with formal training in mental health
- Mental health education (undergraduate level)
- Mental health education (post-basic level)
- Involvement of nurses in mental health policy and legislation
- Role of nurses in mental health
- Prescription of psychotropic medicines

Limitations of the Data

The data collected in the course of this project have a number of limitations. These should be kept in mind when viewing the results.

While best attempts have been made to obtain information from countries on all variables, some respondents could not provide specific details on a few issues, the most common reason being that such data simply do not exist in the countries. Some details may also be missing because the respondents did not have access to the information. When data were not available, the respondents were requested to use the best available information to make estimates.

The survey included some brief working definitions of some concepts. However, better and more complete definitions would have improved the reliability of the information. The results for some of the items are limited by concerns about whether all the respondents interpreted the questions in the same way. For example, some of the respondents indicated that all of the nurses in the country had formal specialized mental health training. We provided some clarification for this question on the survey (i.e. include only nurses who have completed formal training in mental health), but some of the responses were still in error. When these errors were obvious, we excluded the information from the analysis.

Due to these methodological and data availability limitations, information presented in the Atlas should be considered preliminary.

1

HEALTH WORKERS AND NURSES IN HEALTH SETTINGS

In order to provide a context for the information on nurses in mental health, we are including some information from *The World Health Report 2006 – Working together for health*, which was devoted specifically to health workers and is one of the main sources of global information on nurses and other health workers. The information on health service providers contained in this global report was collected using the best available information from various sources. A conservative estimate of the size of the health workforce is 39 million workers globally, of which 41% are nurses (see Table 1.1). WHO estimates a shortage of more than 2.4 million doctors, nurses and midwives in 57 countries.

According to *The World Health Report 2006* the health workforce is in crisis, a crisis to which no country is entirely immune. There is a chronic global shortage of health workers, as a result of decades of underinvestment in their education, training, salaries, working environment and management.

Table 1.1 Distribution of health service providers and nurses in WHO regions and the world

WHO region	All health service providers	Nurses	Nurses as percentage of health service providers
Africa	1 360 000	773 368	56.87%
Americas	12 460 000	4 053 504	32.53%
South-East Asia	4 730 000	1 338 029	28.29%
Europe	11 540 000	6 526 461	56.56%
Eastern Mediterranean	1 580 000	631 527	39.97%
Western Pacific	7 810 000	2 903 286	37.17%
World	**39 470 000**	**16 226 175**	**41.11%**

Source: The World Health Report 2006.

2

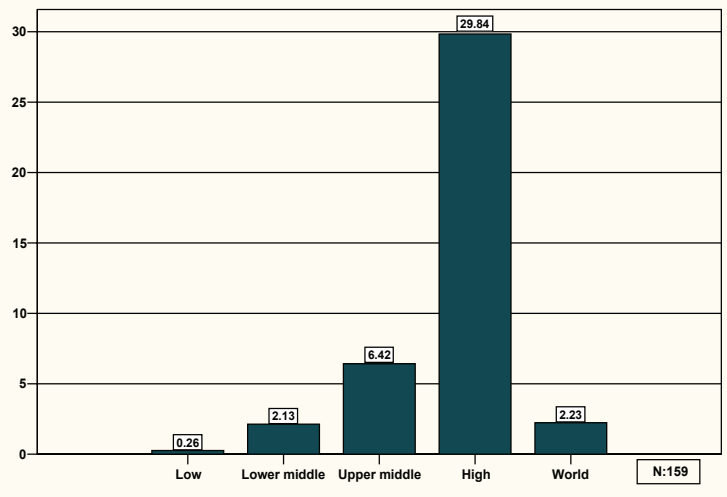
NURSES IN MENTAL HEALTH SETTINGS

The findings shown here are in response to questions asking for the numbers of nurses working in mental hospitals, psychiatric units of general hospitals, and community mental health regardless of whether or not they have had any mental health training. Consequently, this information should not be construed to suggest that all of these nurses are trained in mental health.

The data indicate that there are many more nurses per capita in mental health settings in higher income countries. For example, there are more nurses (per capita) in mental health settings in Europe than in other WHO regions, but especially in comparison to countries in Africa and South-East Asia. These differences are likely to be attributable to the higher number of mental health facilities, the better economic conditions and the higher priority given to mental health in high income countries.

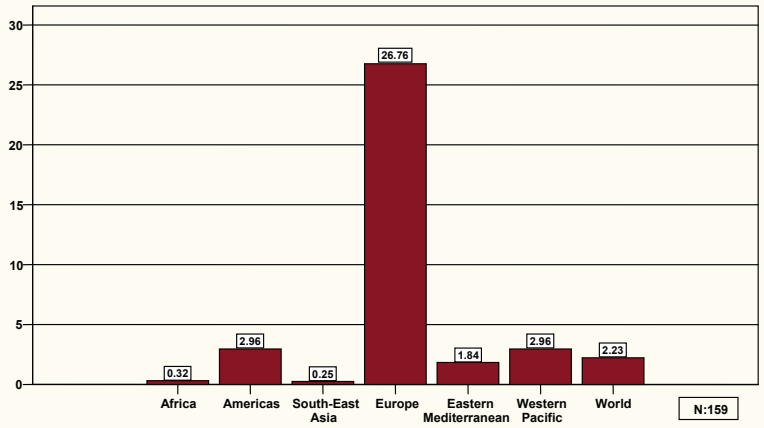
The health systems of many countries are experiencing nursing shortages as they struggle both to recruit new nurses and to retain those who are already part of the system. Many respondents commented that the inability to recruit nurses for mental health services is attributed to a lack of interest in the field and a dearth of incentives for mental health nursing. Countries are also facing difficulties in retaining nurses, as many nurses from developing countries emigrate to find work in other countries or simply choose to leave the profession. This overriding issue aggravates and complicates the mental health nursing shortage. Another reason is the lack of safety and security in the work environment and the stigma associated with mental disorders.

Figure 2.1 Nurses in mental health settings (median per 100 000 population by country income groups)



> "Psychiatry and mental health services are 90% run by nurses in the country."
>
> – Respondent from Gambia

Figure 2.2 Nurses in mental health settings (median per 100 000 population by WHO regions)



"Specialist mental health care teams ideally should include medical and non-medical professionals, such as psychiatrists, clinical psychologists, psychiatric nurses, psychiatric social workers and occupational therapists, who can work together towards the total care and integration of patients in the community (Nurses, as mental health specialists, play a fundamental role working within mental health care teams in the improvement of the quality of care for people with mental disorders)."

Source: The World Health Report 2001

Figure 2.3 Nurses in mental health settings by type of service (median per 100 000 population by country income groups)

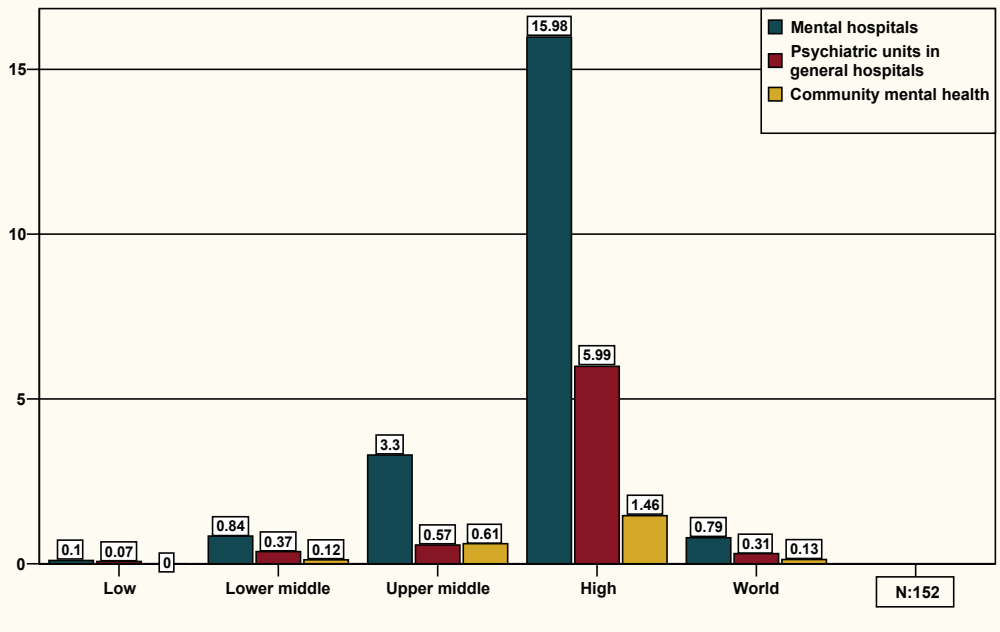
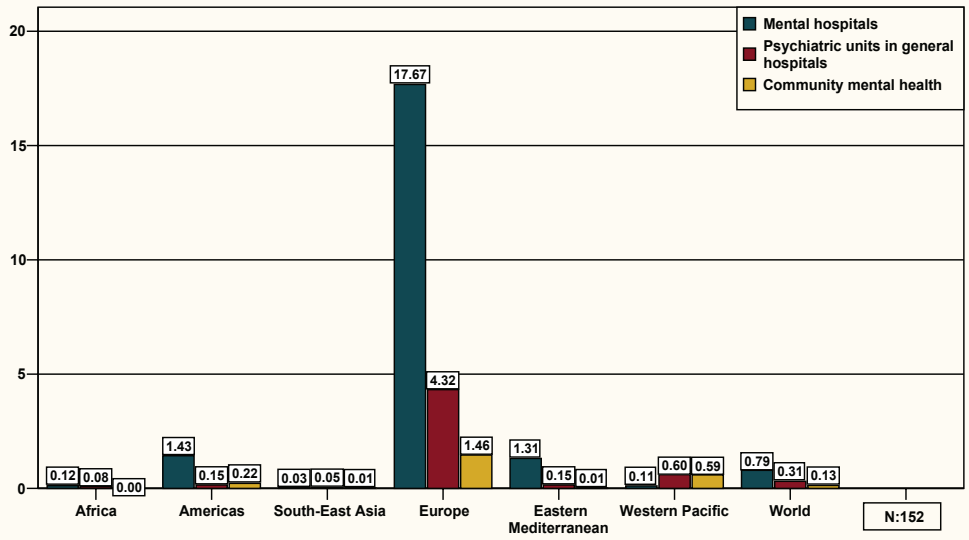


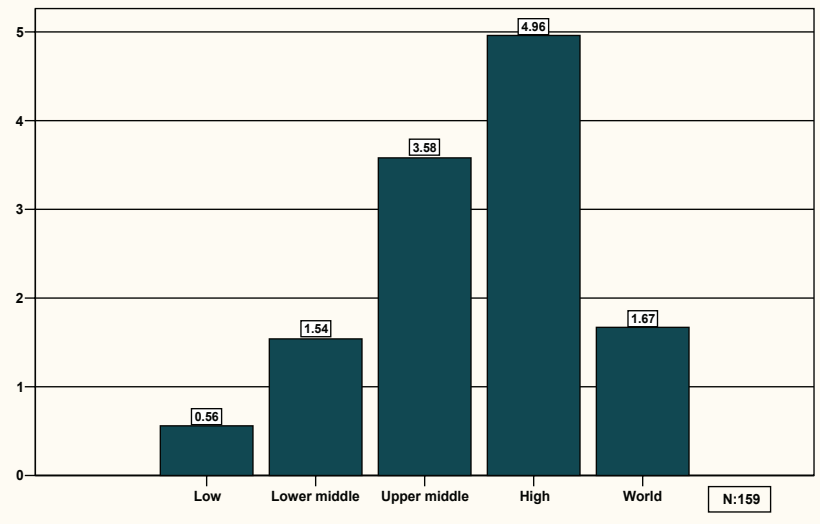
Figure 2.4 Nurses in mental health settings by type of service (median per 100 000 population by WHO regions)



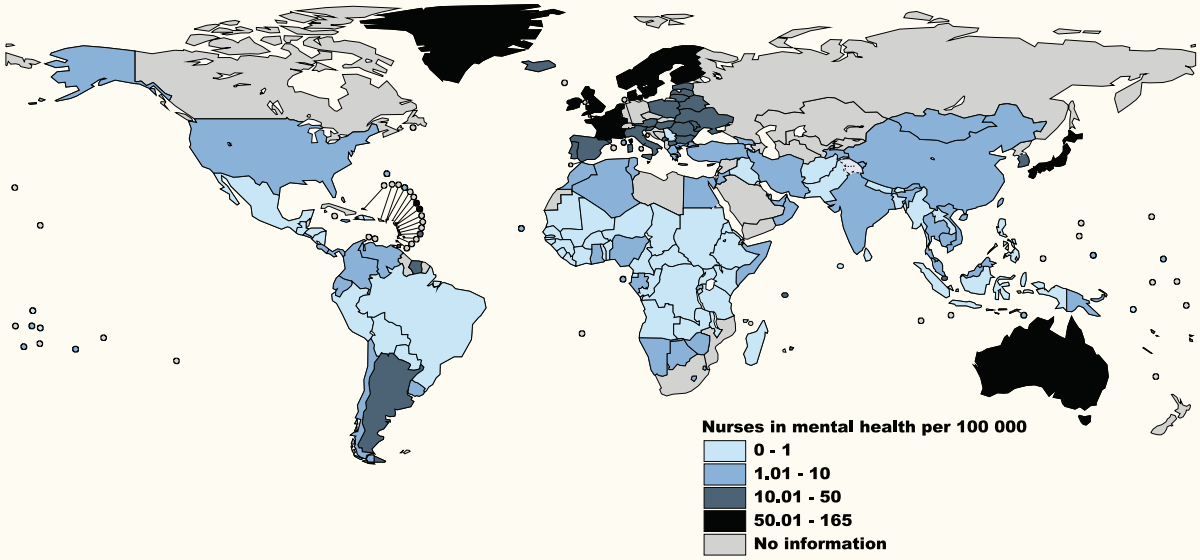
"Mental health services are not fully appreciated and established in our country as yet. Those in top level management need to understand the seriousness and impact of mental health on society as a whole. Both the Ministry of Health and Government need to be committed to addressing the problems of mental health. The lack of resources in terms of human resources could be improved by an increase in the level of motivation of nurses in the mental health area from the moment they start to study."

– Respondent from Chile

Figure 2.5 Nurses in mental health settings (proportion out of total nurses by country income groups)



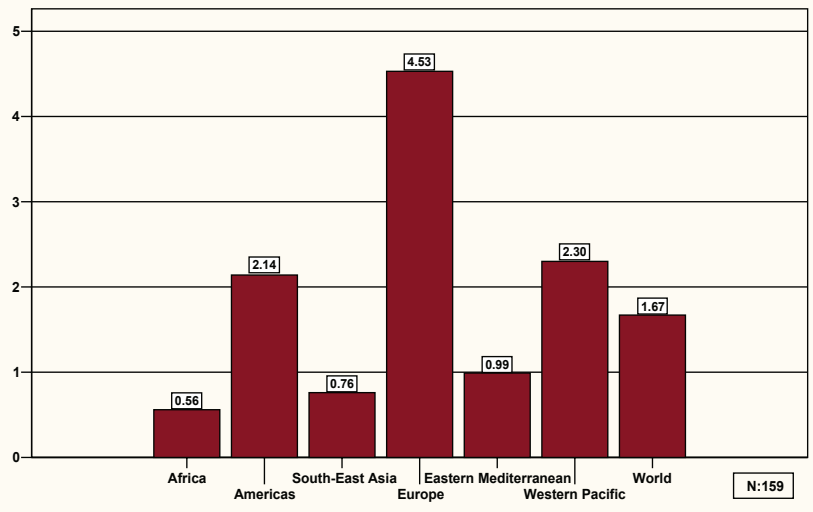
Map 2.1 Nurses in mental health settings (per 100 000 population)



"In Cambodia, there are only 26 psychiatrists. This number is a small amount for the total Cambodian people and there are not ... any psychiatrists working in the communities. In some provinces, psychiatric nurses are doing the role of psychiatrists; examining the patients with mental disorders and following-up their treatment."

– Respondent from Cambodia

Figure 2.6 Nurses in mental health settings (proportion out of total nurses by WHO regions)



"We have to take care of nurses' mental health."

– Respondent from Guatemala

3

NURSES IN MENTAL HOSPITALS

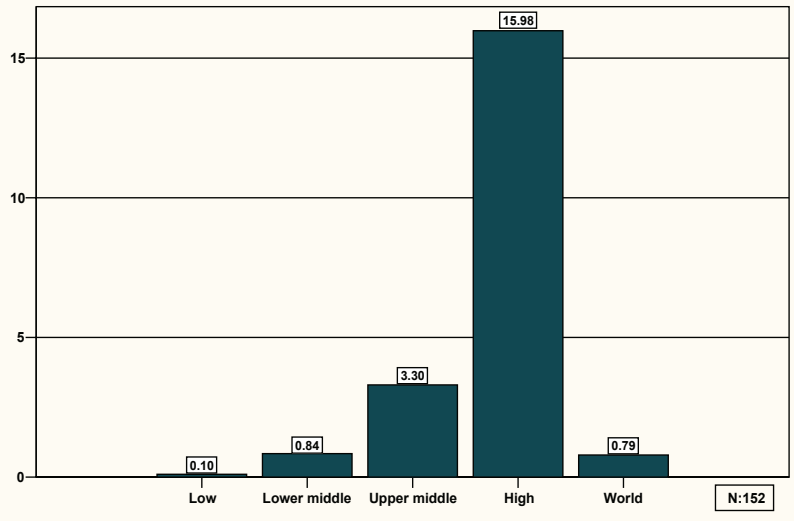
This information comes from responses to the question on the number of nurses working in mental or psychiatric hospitals. These numbers do not include nurses working in psychiatric units of general hospitals. As indicated before, these numbers include nurses working in mental hospitals regardless of whether or not they have had mental health training.

The summary data for this item show that low income countries generally have the lowest rates of nurses working in mental hospitals. This result is expected because low income countries have fewer mental hospitals and fewer staff per bed in the hospitals. Consequently, there is a large disparity between countries in the Americas, Europe and the Eastern Mediterranean compared with countries in the other regions.

Many respondents expressed concern about a lack of teamwork, low salaries and safety issues. To enhance the level of cooperation between staff, some respondents suggested using interdisciplinary teams of mental health staff for prevention and promotion activities.

Respondents cited low salaries as an important issue and suggested either raising nurses' salaries or providing them with incentives. A number of respondents were concerned about the physical and mental risks to nurses in the workplace and nurse safety. Many suggested that the safety risk to nurses could be mitigated by instituting organizational and legal safeguards. Finally, several countries mentioned that the low nurse–patient ratio had a detrimental effect on the overall working environment, affecting the ability of nurses to provide appropriate care.

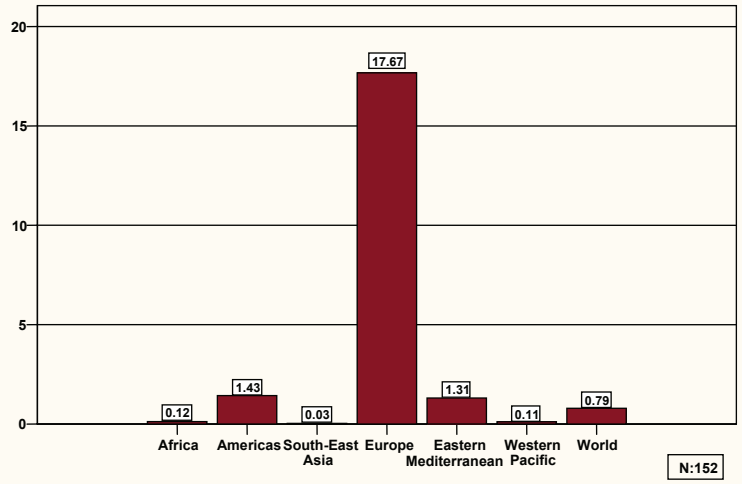
Figure 3.1 Nurses in mental hospitals (median per 100 000 population by country income groups)



"Mental health nursing is in its worst condition and needs urgent attention."

-Respondent from Afghanistan

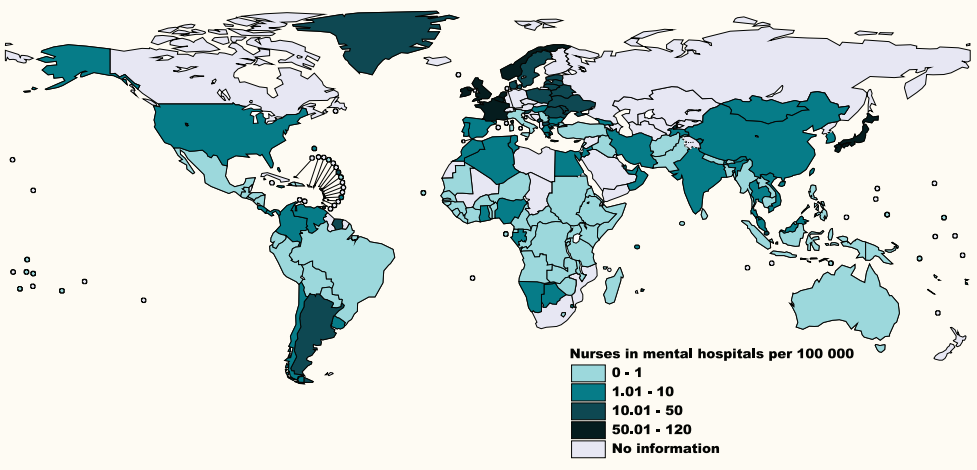
Figure 3.2 Nurses in mental hospitals (median per 100 000 population by WHO regions)



"In most developing countries, there is no psychiatric care for the majority of the population; the only services available are in mental hospitals. These mental hospitals are usually centralized and not easily accessible, so people often seek help there only as a last resort. The hospitals are large in size, built for economy of function rather than treatment. In a way, the asylum becomes a community of its own with very little contact with society at large. The hospitals operate under legislation, which is more penal than therapeutic. In many countries, laws, that are more than 40 years old, place barriers to admission and discharge."

Source: World Health Report 2001 (WHO, 2001)

Map 3.1 Nurses in mental hospitals (per 100 000 population)



4

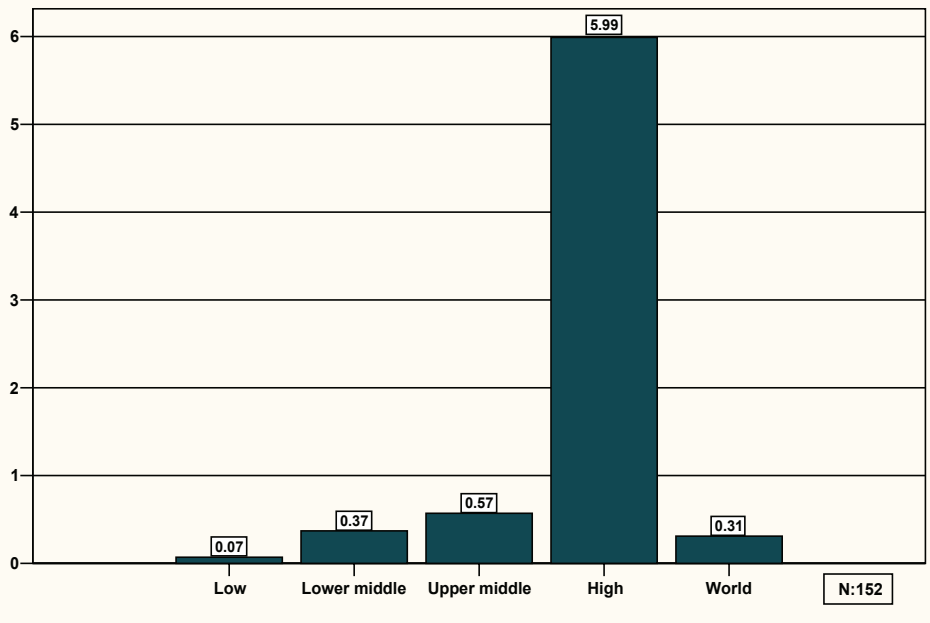
NURSES IN PSYCHIATRIC UNITS OF GENERAL HOSPITALS

This information comes from responses to the question on the number of nurses working in psychiatric units of general hospitals.

The summary data show that there is a large difference in rates between high income countries and low and middle income countries. Some of this difference is expected because low income countries have few psychiatric units of general hospitals. Again, these differences are reflected in the discrepancy between the countries in Europe and countries in the other regions.

Many countries use a general health care model for mental health. Respondents pointed out a need to increase the availability of mental health care in the community and to improve the level of integration of mental health care in primary care. This integration is crucial for nurses, because they play an important role in primary care. In addition, many respondents indicated that services and facilities need to be organized in such a way as to ensure equal distribution of resources and access to care.

Figure 4.1 Nurses in psychiatric units of general hospitals (median per 100 000 population by country income groups)



Quality improvement of mental health care in Panama

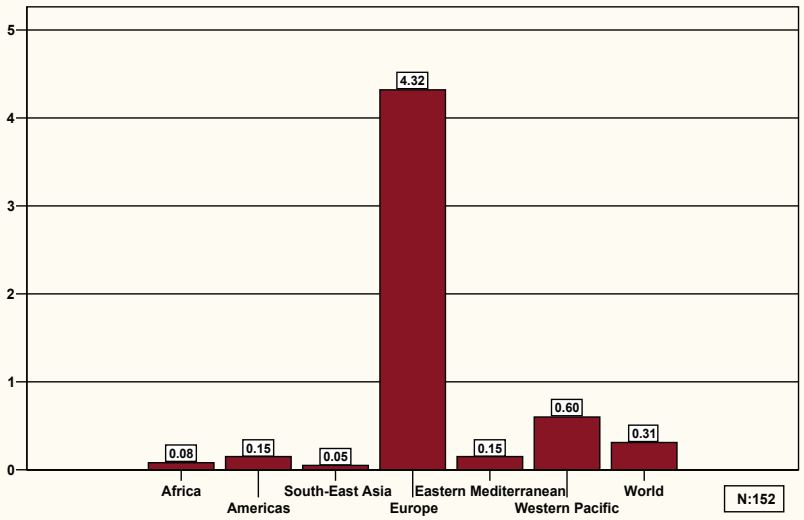
Panama has a population of nearly 3 million people, more than 1 million of whom live in moderate to severe poverty. The country faces multiple health and mental health problems that threaten the delivery of quality care. Prevalent disorders include depression, mental health consequences of violence (against children and women, homicide and suicide), substance abuse and stress-related illnesses. Suicide among the adolescent population was identified by nurses in August 2004 as one of the most serious mental health issues faced by providers of care. Nurses reported a poor epidemiological tracking system for assessing risk factors or follow-up of individuals who have returned to the community. Barriers to care include stigma, inadequate funding for mental health initiatives, poor research activity, poor family and community involvement with the mentally ill individual, and inadequate human and material resources to effectively treat the population in need.

A project has been organized to develop and implement a capacity-building team to improve mental health practice and service delivery in Panama. The collaborating partners include the University of Maryland WHO/PAHO Collaborating Center, the Sigma Theta Tau International Honor Society of Nursing, the International Society of Psychiatric Nursing, the University of Alberta WHO/PAHO Collaborating Center, the University of Panama School of Nursing, and Georgetown University School of Nursing and Health Studies. The long-range benefits are expected to include a template that could serve as a model for mental health-care practice and delivery in other Latin American and Caribbean countries.

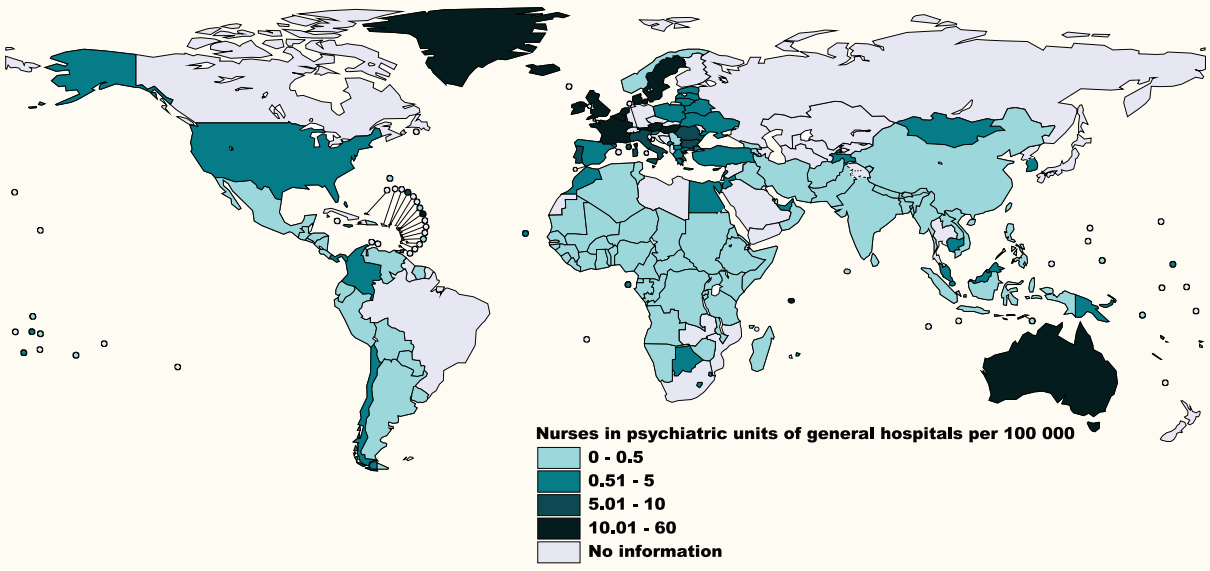
Assessment of needs and current mental health services was obtained from 40 mental health nurses in Panama and from four site visits. What was striking was their dedication to providing good patient care, their passion about being catalysts for good care, their desire to acquire new knowledge and their desire to make positive changes in the existing mental health system. The nurses repeatedly voiced their wish to be better connected with others in Panama and in other countries. Key recommendations emerged from the assessment: the need for interdisciplinary participation to bring together key individuals/partners from practice, research and administration as an advisory group to identify quality practice indicators that would lead to quality services; to develop and implement provider training modules; to develop a mentoring process between country and out of country individuals (nurses, educators and community leaders); and to support faculty exchange programmes.

Contributed by Sally Raphel and Edilma L. Yearwood

Figure 4.2 Nurses in psychiatric units of general hospitals (median per 100 000 population by WHO regions)



Map 4.1 Nurses in psychiatric units of general hospitals (per 100 000 population)



5

NURSES IN COMMUNITY MENTAL HEALTH

This information comes from responses to the question on the number of nurses working in community mental health.

The summary data show a strong positive relationship between the rate of nurses in community mental health and the country income level: the rate for low income countries is quite low in comparison with all the other country income groups. This result is likely to be partly because low income countries have fewer community mental health settings.

Many respondents mentioned the need to improve patient models of care, from a biological/medical model to a therapeutic and human-centred approach. They emphasized the necessity to expand the types of services provided, and suggested adding psychotherapy, psychosocial support, group therapy and counselling to patients' treatment regimens. Finally, a number of respondents recommended the expansion of services to specific vulnerable groups within the community, such as children and adolescents, elderly people, forensic patients and patients with comorbid conditions.

An important matter was raised about the stigma associated with mental disorders, concerning people

Figure 5.1 Nurses in community mental health settings (median per 100 000 population by country income groups)

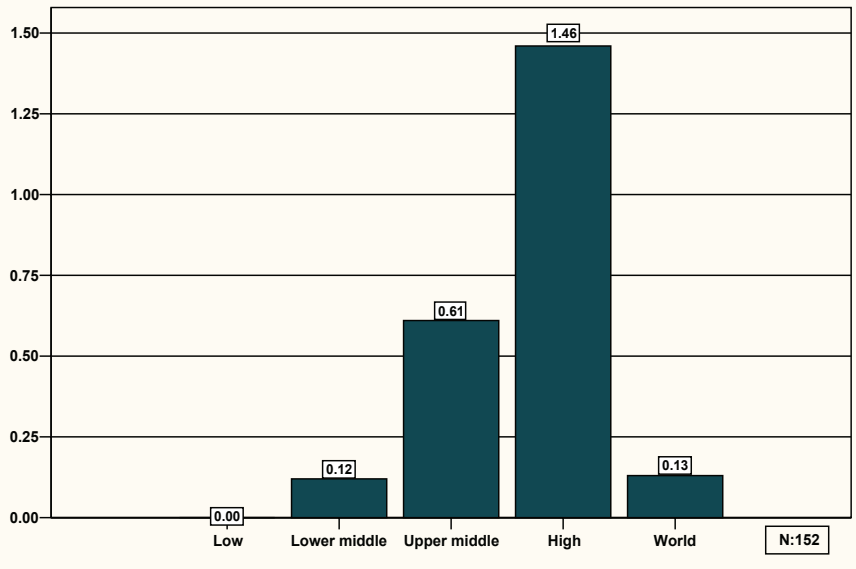
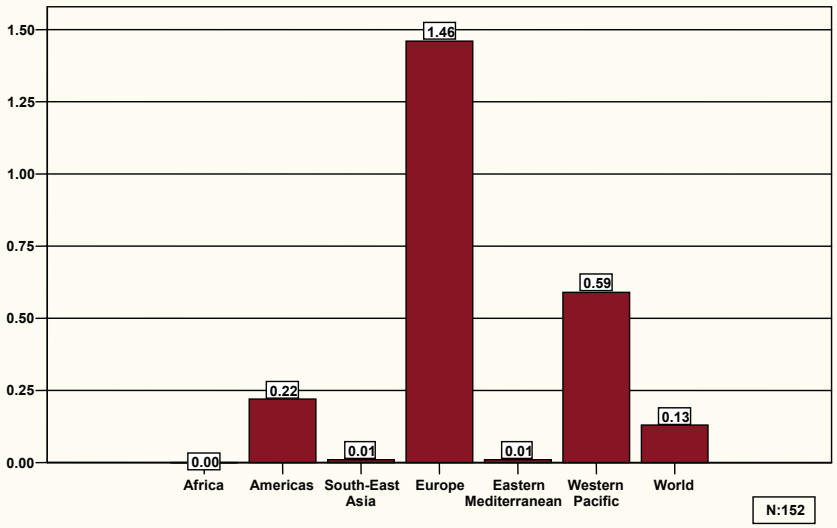
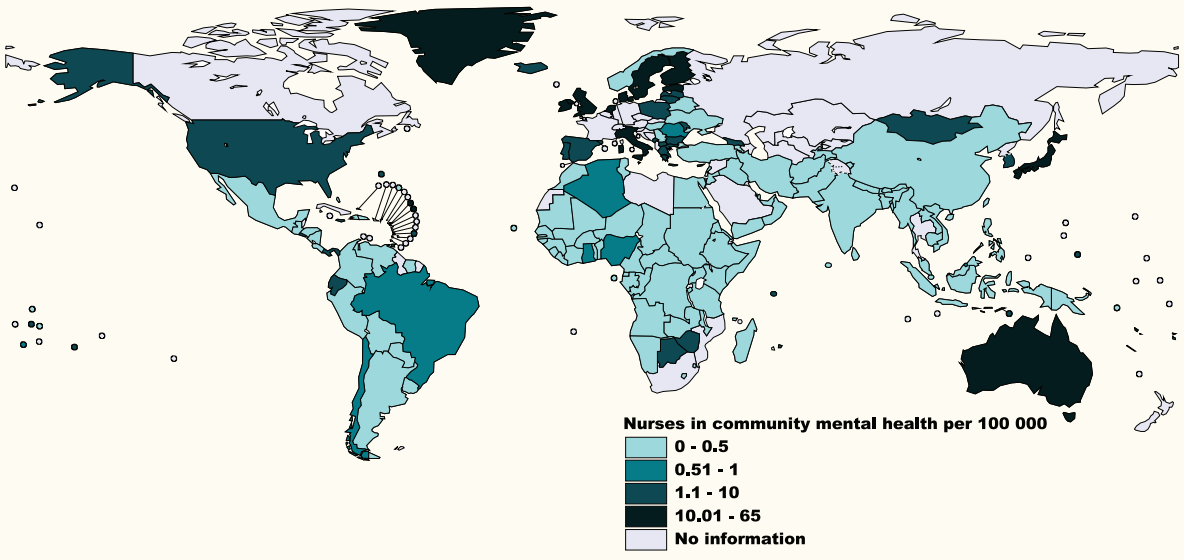


Figure 5.2 Nurses in community mental health settings (median per 100 000 population by WHO regions)



with mental disorders as well as mental health providers including nurses. Respondents identified the usefulness of more mental health promotion and advocacy programmes in order to reduce the stigma and to increase the awareness of mental health care in the community. Finally, some respondents were concerned about human rights violations associated with coercive psychiatric practices.

Map 5.1 Nurses in community mental health settings (per 100 000 population)



6

NURSES WITH FORMAL TRAINING IN MENTAL HEALTH

This information comes from responses to the question on the number of nurses with formal training in psychiatric/mental health nursing. The definition of mental health nurse is limited to "only nurses who have completed formal mental health training".

The low income countries have a very low rate of nurses with formal education in mental health compared with countries in the middle and high income groups, as expected. However, the difference between low and middle income countries is not as marked for low population countries. This may be attributable to the greater variability for low population countries: since the populations are small, even a small number of nurses trained in mental health will increase the rate.

The proportion of nurses with formal training in mental health, out of the total number of nurses working in all mental health settings, is surprisingly highest in Africa, followed by Europe. The other regions have percentages around 50%, except South-East Asia where the proportion is lower than 15%.

Figures 6.3 and 6.4 show that African and low income countries have a higher proportion of nurses trained in mental health working in mental health settings. This result appears to be in conflict with the previous data that show very low levels of

Figure 6.1 Nurses with formal mental health education (median per 100 000 population by country income groups)

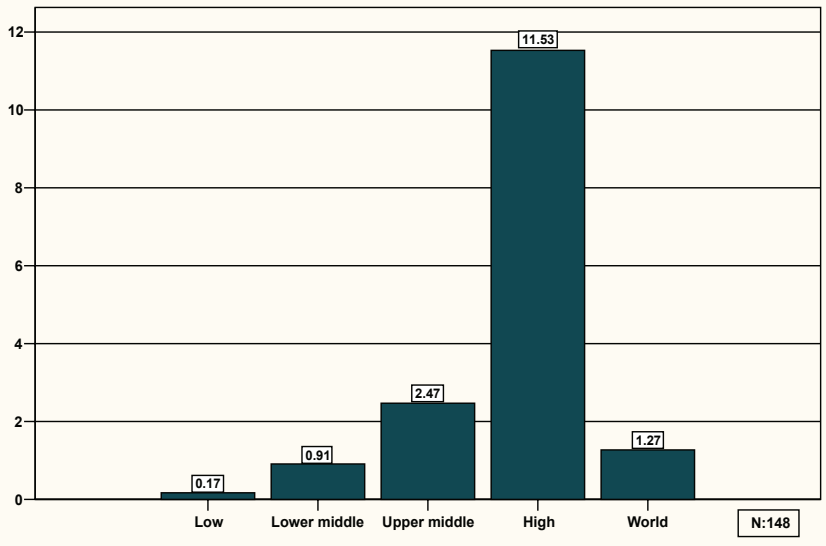


Figure 6.2 Nurses with formal mental health education (median per 100 000 population by WHO regions)

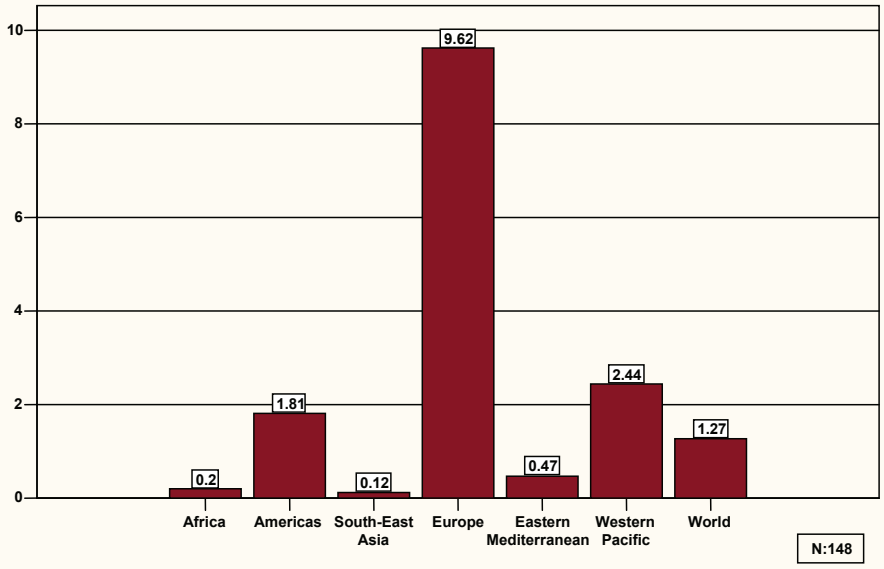
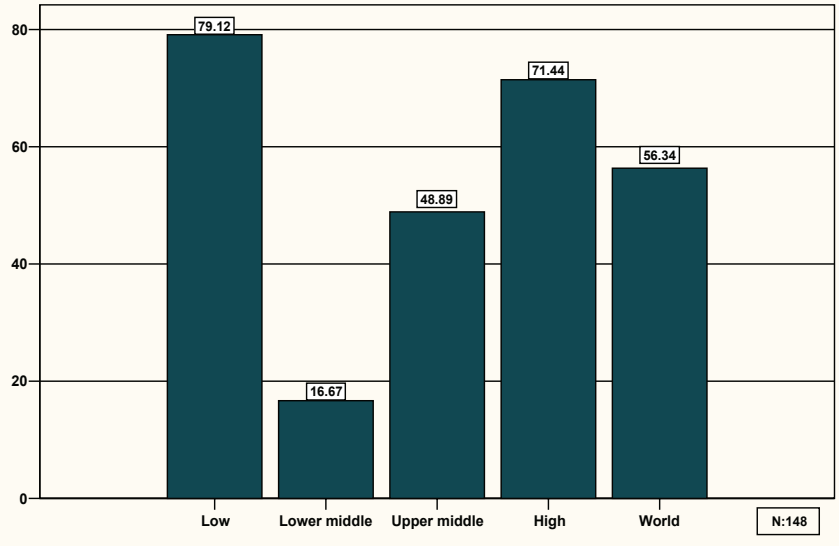


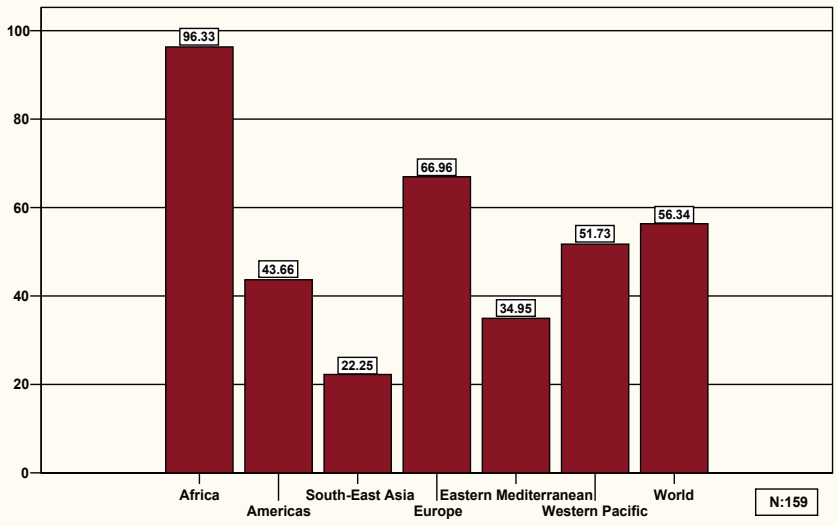
Figure 6.3 Nurses with formal training in mental health (proportion out of nurses working in mental health settings by country income groups)



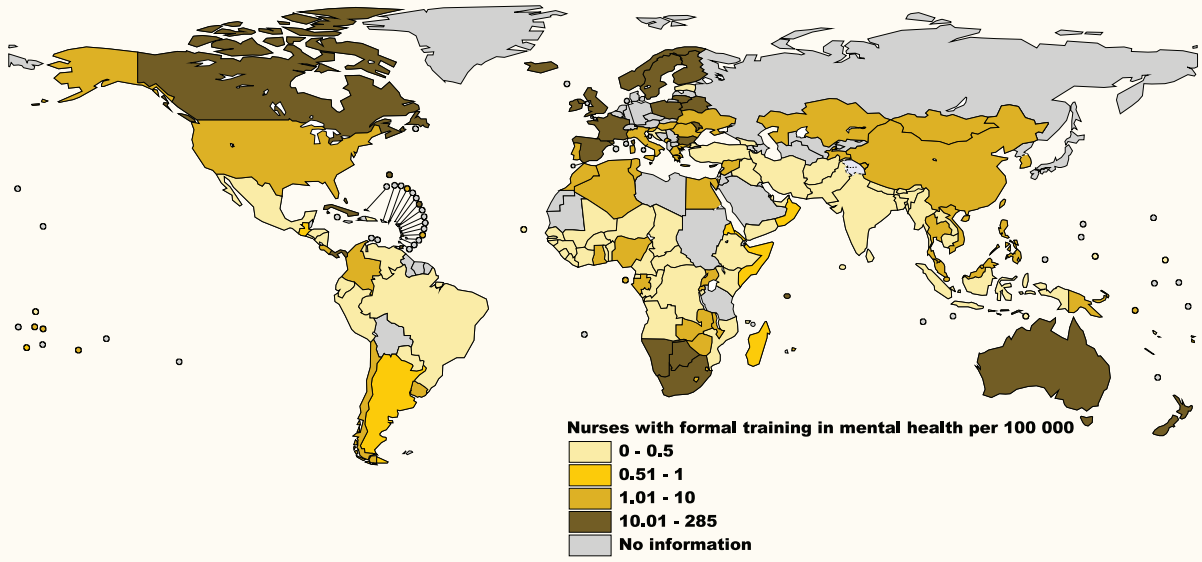
formal mental health education in these countries. However, on further inspection the result is predictable. There are very few mental health settings in low income countries and in Africa, and there are few nurses in these settings; consequently, it is not surprising that there is a higher proportion of formally trained mental health nurses in these settings. Even though the proportion of mental health trained nurses in mental health settings is high, the overall numbers are still very low.

Some respondents have suggested that the international community can play an instrumental role in promoting collaboration and information sharing among mental health nurses in many countries. Suggestions for action include establishing an online nursing network, strengthening affiliations with international agencies such as WHO or ICN and formalizing the exchange of best practices. In addition, many respondents asked for increased access to existing and new material on mental health/psychiatric nursing, including journals, publications and training materials.

Figure 6.4 Nurses with formal training in mental health (proportion out of nurses working in mental health settings by WHO regions)



Map 6.1 Nurses with formal training in mental health (per 100 000 population)



“Mental health and psychiatry ... do not receive much support financially. As a result, most activities are not done. Stigma is a major problem... There is a lack of community participation. Most hospitals have no mental health/psychiatric units and patients are always referred to the mental hospital. Most essential psychotropics are unavailable, which affects the management of patients. The programme lacks trained professionals, which affects the care and management of the patients... More attention has to be given to this programme.”

– Respondent from Malawi

7

MENTAL HEALTH EDUCATION (UNDERGRADUATE LEVEL)

The information in Figures 7.1 and 7.2 comes from responses to the question on the availability of education on mental health/psychiatric nursing in undergraduate/basic nursing courses. Almost all high income countries include mental health training in undergraduate nurse training. However, there are 19 countries (mostly in the low income group) where there is no mental health nursing education in undergraduate/basic nursing courses.

The information in Figures 7.3 and 7.4 comes from responses to the question about whether nurses with undergraduate training are allowed to practice as mental health/psychiatric nurses. It is interesting to note that both high and low income countries appear to allow this practice to undergraduate nurses, though few middle income countries do so.

The percentage of countries where the undergraduate mental health programme includes all the six components is similar across countries with different income levels. Ethical and legal aspects and research in mental health, however, are more frequently included in high income countries (Figure 7.5).

Figure 7.1 Availability of mental health education in undergraduate nursing courses (by country income groups)

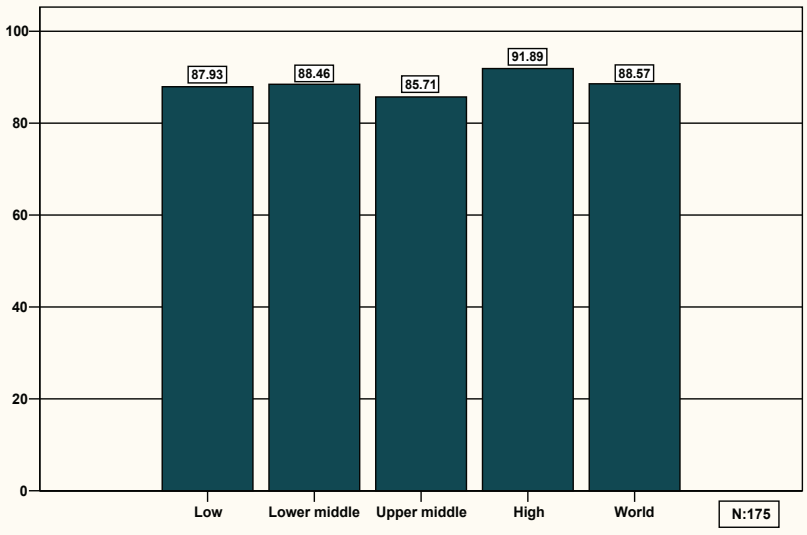
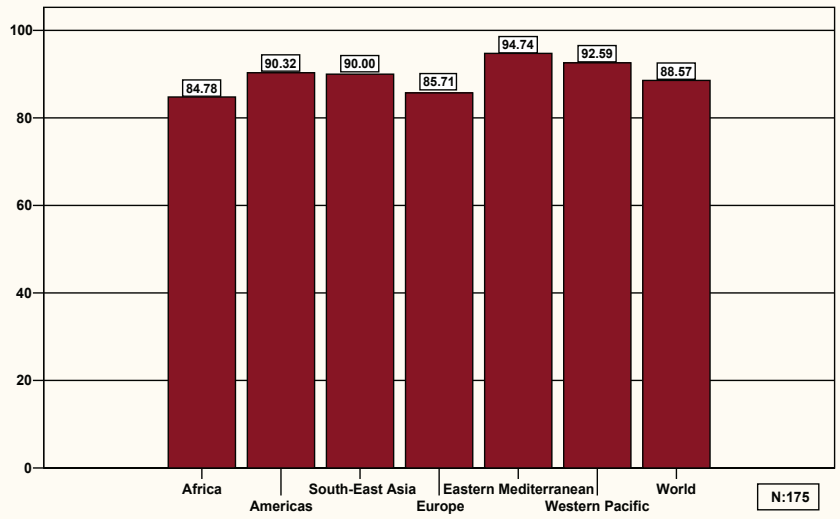
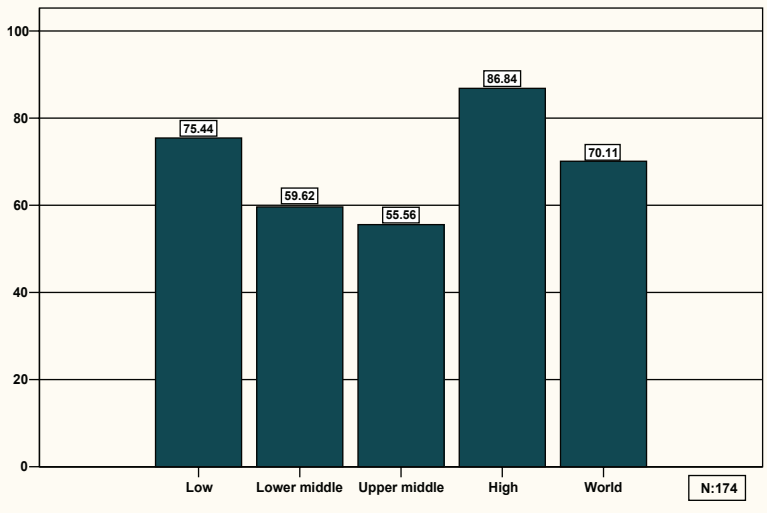


Figure 7.2 Availability of mental health education in undergraduate nursing courses (by WHO regions)



> "Shortage of psychiatrists leads to psychiatric nurses having more responsibility. In practice, the responsibilities and authorities of nurses are in conflict; this situation must be improved."
>
> – Respondent from Finland

Figure 7.3 Authorization for nurses with undergraduate education to practice as mental health nurses (by country income groups)



Mental health curriculum in nursing education: Brazil

Mental health services in many countries are now based primarily in the community. In Brazil, its psychiatric reform has led to the development of community psychosocial care centres that welcome users, respect their differences, and provide an environment that encourages self expression and helps to build self-esteem.

The theoretical care model that emerged from Brazil's psychiatric reform requires a new way of responding to mental disorders and patients. In this context, nurses need to change from specialized technicians into members of an interdisciplinary team providing mental health care in the community. In municipal services, one nurse is frequently responsible for managing three or four health programmes (including mental health) involving a considerable contingent of auxiliary nursing staff and community agents. It is now imperative that nurses be educated for these roles in general community and mental health practice if they are to deliver appropriate and effective health care to the population. It is also important to increase the knowledge and skills of the existing community-based generalist nurses so that they can engage in mental health promotion and provide psychosocial support to individuals and families.

Educating nurses to provide health services for the population is predominantly undertaken at the undergraduate or pre-service level. Preparation of nurses for psychiatric nursing practice occurs generally at the post-basic or graduate/post-graduate level, although in some countries direct entry programmes for mental health exist at pre-service level.

Increasingly, nursing schools are taking an integrated approach to curriculum development, melding content and subject areas such as mental health into the core nursing subjects. Some universities and schools include a substantial amount of mental health nursing content in undergraduate curricula alongside relevant clinical experience. It is evident, however, that many others are failing to prepare graduates to practise in mental health nursing as they provide very little, if any, specialized mental health nursing content within undergraduate curricula and/or fail to include clinical mental health practice. This is a matter that requires urgent attention by nurse educators and nurse regulators, as these programmes are failing to prepare nurses to meet the needs of the population.

A large number of people will experience a mental disorder at some time during their lives. As nurses make up the largest section of the health workforce, they are likely to be the ones providing care. Evidence shows that exposure to appropriate curriculum content about mental health and supervised clinical practice in a relevant mental health area makes it more likely that student nurses will develop positive attitudes to mental health and to people with mental disorders.

Contributed by Margarita Antonia Villar Luis and Genevieve Gray

Figure 7.4 Authorization for nurses with undergraduate education to practice as mental health nurses (by WHO regions)

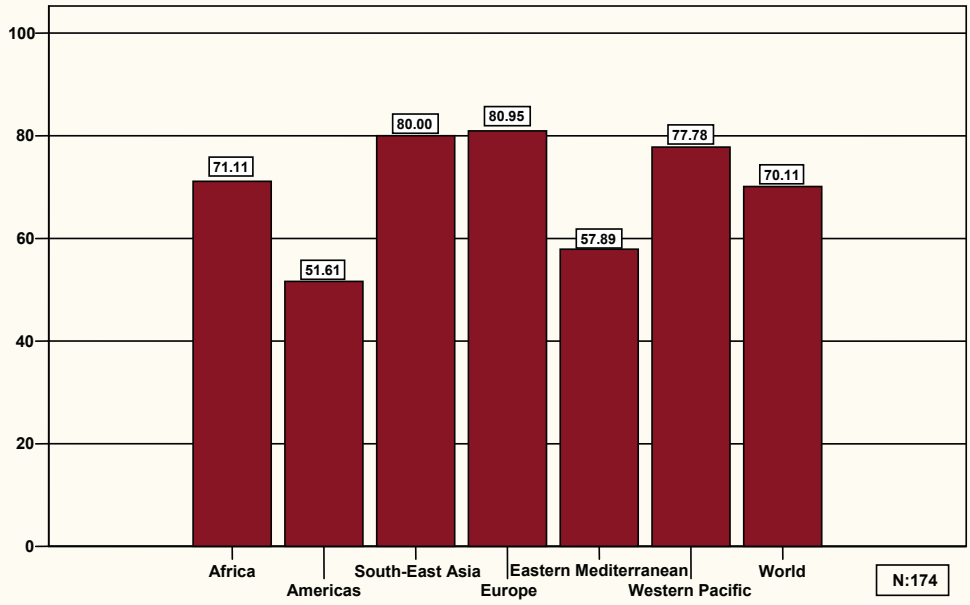
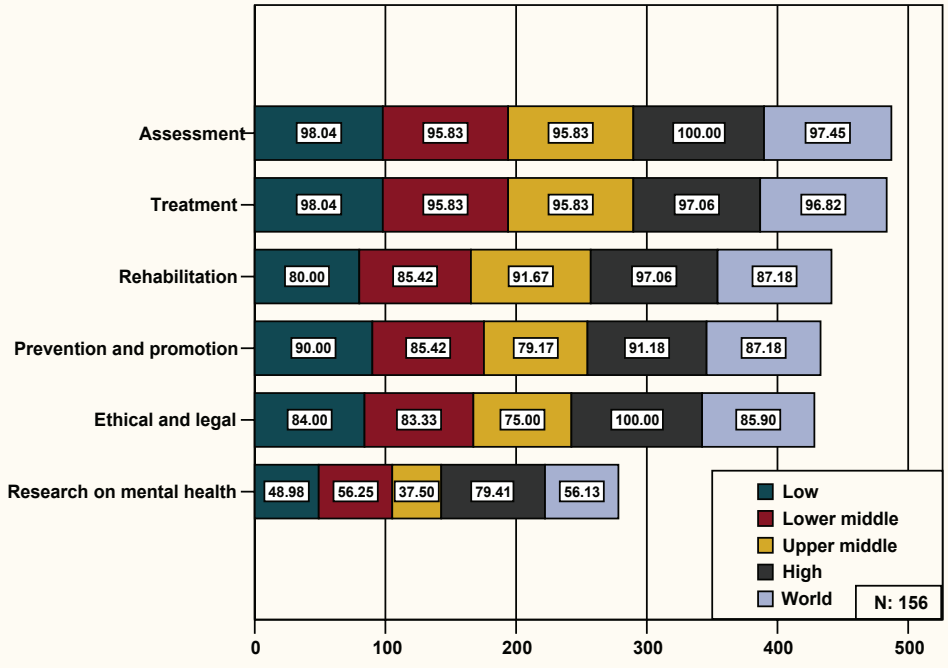


Figure 7.5 Mental health components of the undergraduate nursing programme (by country income groups)



The information illustrated in Figures 7.6 and 7.7 comes from the responses to the questions about whether basic undergraduate training includes experience in mental hospitals, psychiatric units of general hospitals, or community mental health settings.

Mental hospitals

The data reflect a strong positive relationship between country income levels and experience in mental or psychiatric hospitals in nurse education programmes. The higher values are in the Americas, Europe and the Eastern Mediterranean, and lower in South-East Asia, Africa and the Western Pacific.

Figure 7.6 Undergraduate nursing training in mental health settings (by country income groups)

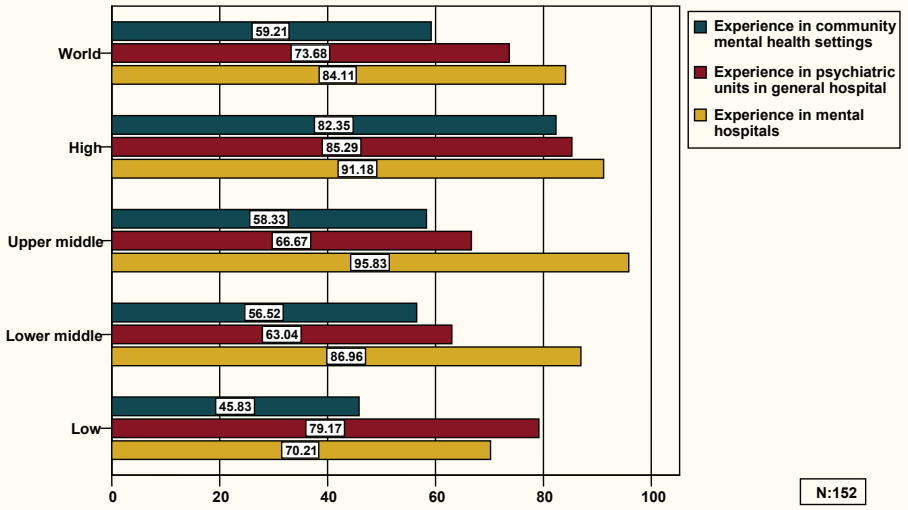
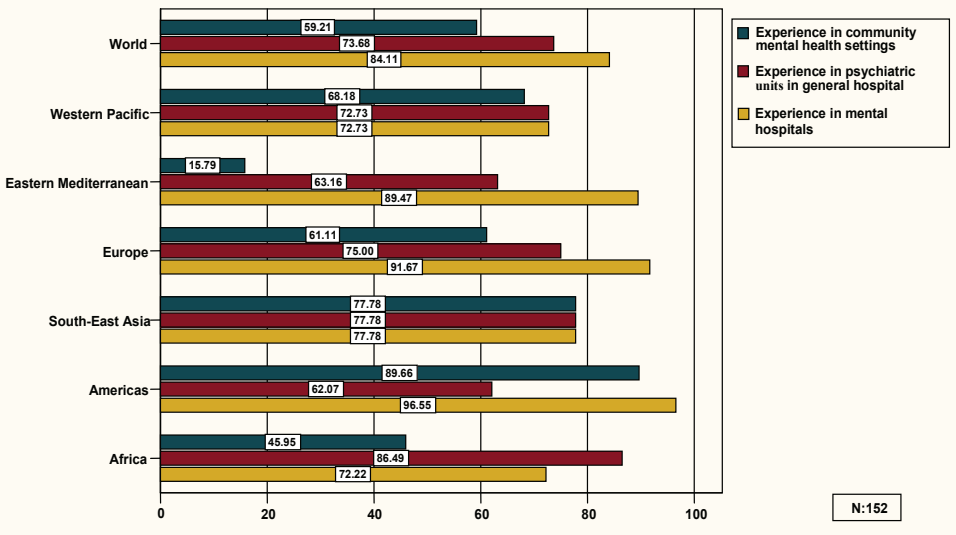


Figure 7.7 Undergraduate nursing training in mental health settings (by WHO regions)



In Africa, the low value could reflect the limited availability of mental hospitals in the region.

Psychiatric units of general hospitals

The higher values are in high income countries, as expected. However, the low income countries have a higher value than do the middle income countries. This may be the result of schools placing more nurses in psychiatric units of general hospitals because there are few other mental health settings.

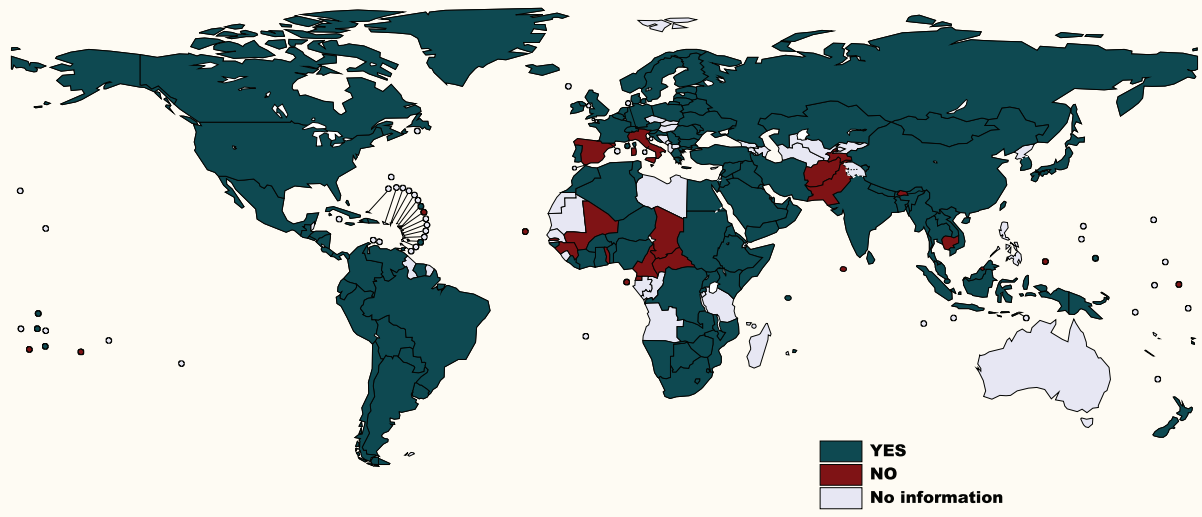
Community mental health

The values are again correlated with income level, so the higher values are in the high income group of countries and the lower values are in the low income category. The higher levels of experience in community services are in the Americas and South-East Asia and not in Europe as would have been expected. It is interesting to note the very low level of experience in Eastern Mediterranean countries, which is far below that of African countries.

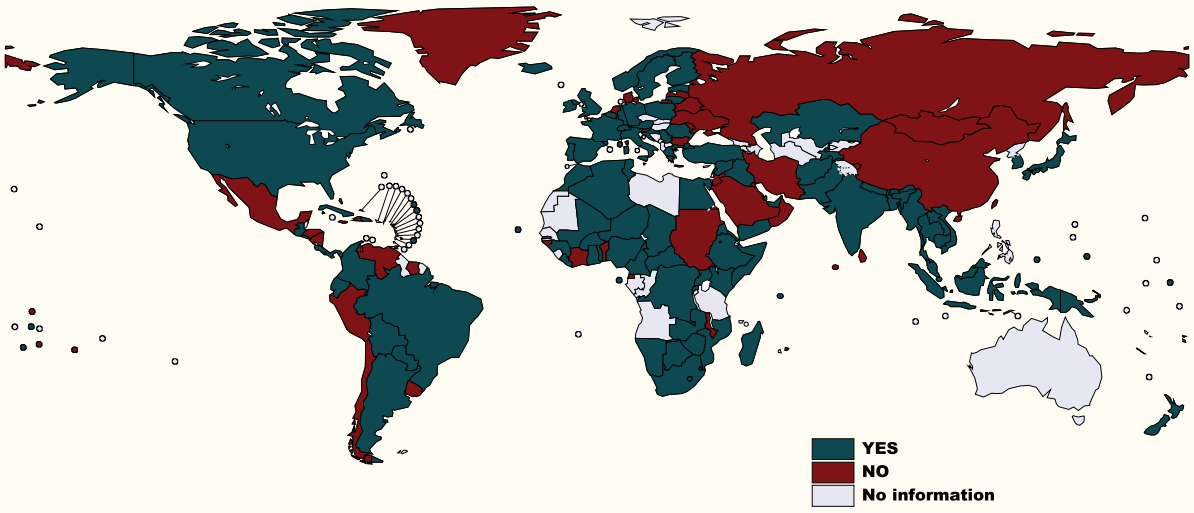
Many respondents identified the need to improve mental health basic and post-basic education as well as to provide continuing education and specialized training to existing nurses. The most common issues cited under the broad category of training and education were: improving the overall quality of basic and post-basic education for nurses, providing on-the-job or continuing education on mental health topics, and promoting specialized training in psychiatry at the post-basic level. This last measure could also reduce the imbalance between specialized nurses and non-specialized nurses within the mental health sector, which was a major concern of many countries. With respect to improving the quality of nursing education, respondents suggested varying the curriculum, devoting more hours to mental health, training more nurse educators and establishing psychiatry as a priority in nursing education.

In addition, several respondents expressed an interest in developing exchange programmes with other countries by increasing the availability of fellowships and scholarships.

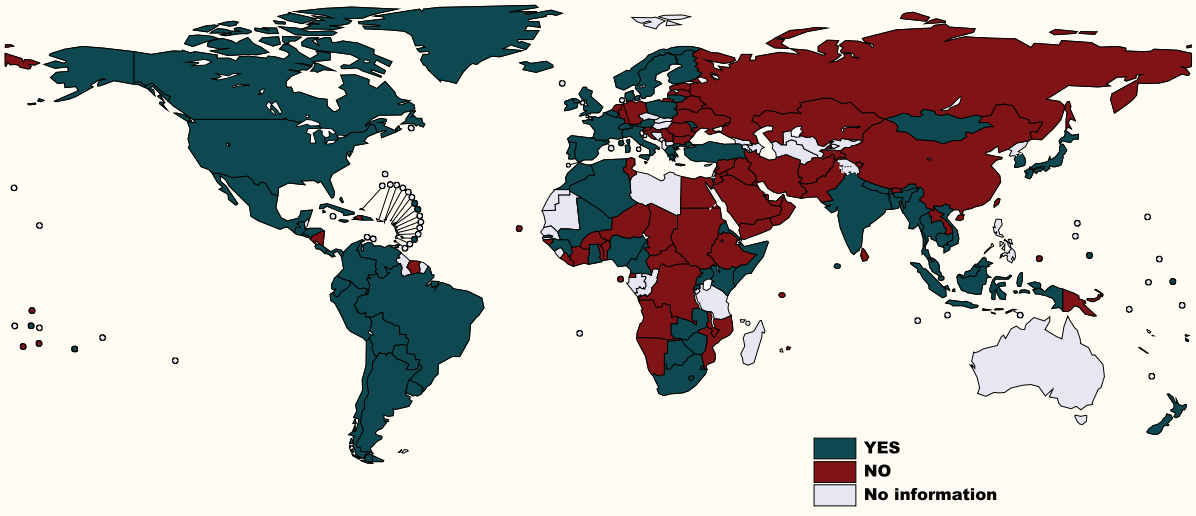
Map 7.1 Availability of clinical experience in mental hospitals in undergraduate nursing courses



Map 7.2 Availability of clinical experience in psychiatric units of general hospitals in undergraduate nursing courses



Map 7.3 Availability of clinical experience in community mental health in undergraduate nursing courses



8

MENTAL HEALTH EDUCATION (POST-BASIC LEVEL)

There is a positive relationship between country income level and the availability of both specialist post-basic education and continuing education programmes for mental health nurses. High income countries are more likely to have these programmes and low income countries are less likely.

A large number of respondents requested expert technical assistance on two levels: 1) to assess the needs of mental health systems; and 2) to develop specific strategies and programmes for meeting these needs. Several respondents requested technical consultation in the following areas: human resource development, policy development, organization of health services, and assessment of health services. (Some suggestions were made for WHO to provide this consultation.) The necessity for internationally standardized protocols for mental health interventions was also expressed.

Figure 8.1 Availability of post-basic and continuing education in mental health for nurses (by country income groups)

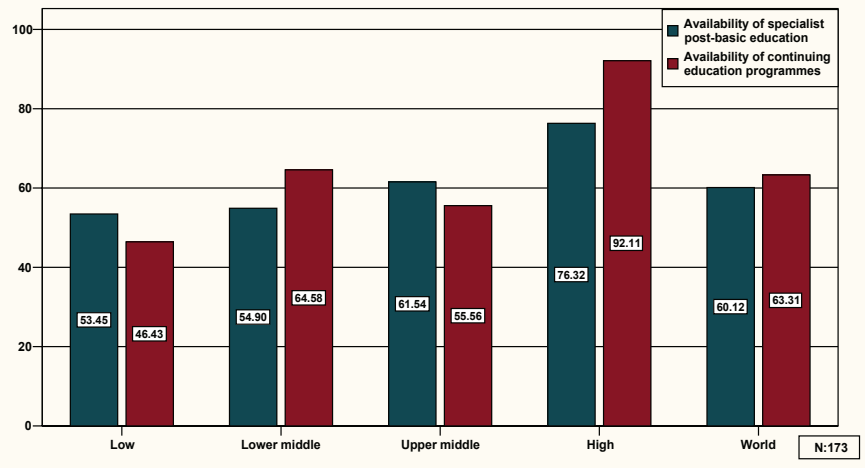
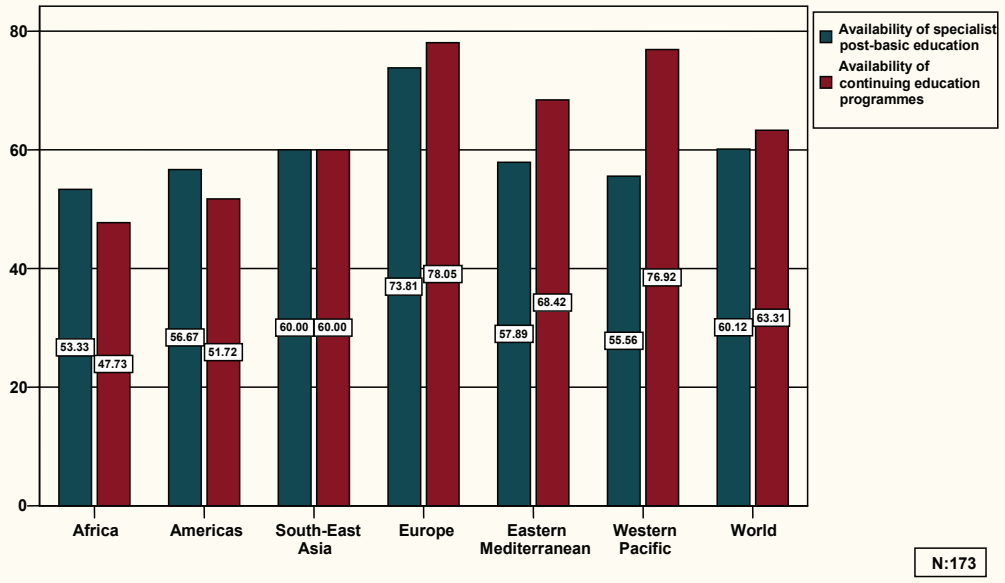


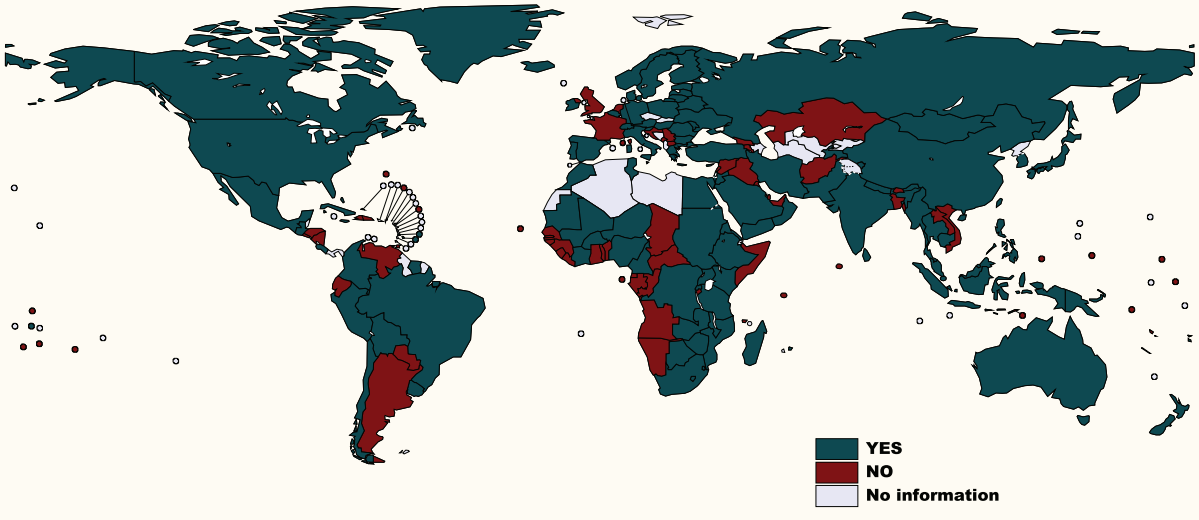
Figure 8.2 Availability of post-basic and continuing education in mental health for nurses (by WHO regions)



“The care and treatment, the education and prevention of mental health/illness/addictions are a societal issue and responsibility. To even begin working towards developing a nursing workforce in this country, there must be a recognition of the value of people living with these issues and a belief that they too are deserving.”

– Respondent from Canada

Map 8.1 Availability of specialist post-basic education for mental health nursing



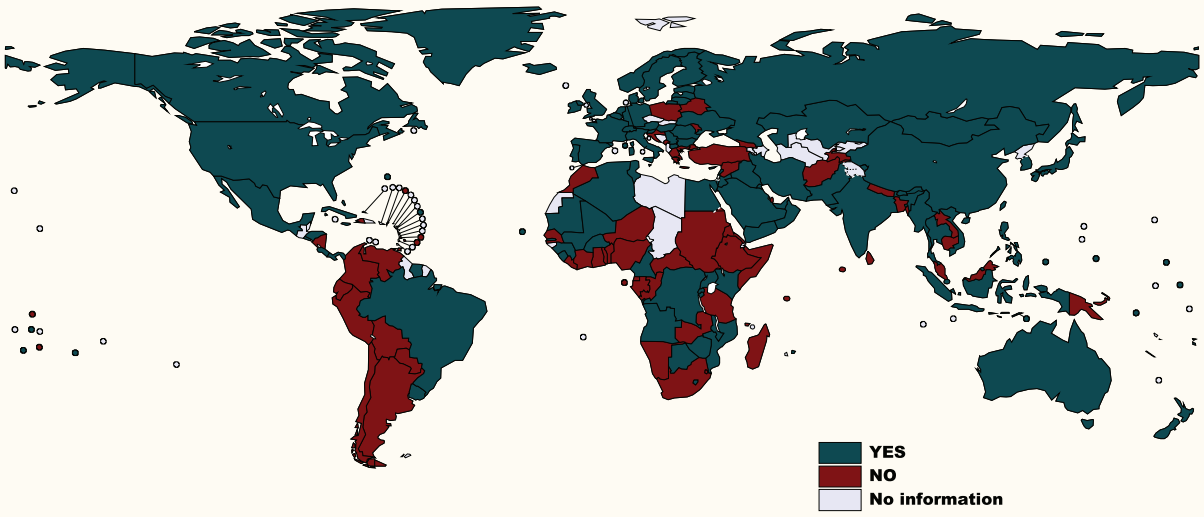
Most developing countries do not have adequate training programmes at national level to train psychiatrists, psychiatric nurses, clinical psychologists, psychiatric social workers and occupational therapists. Since there are few specialized professionals, the community turns to the available traditional healers.

Development of human resources is among the ten "minimum actions recommended for mental health care" in the World Health Report of 2001. Specific actions for this recommendation according to the three levels of resources are:

- Train psychiatrists and psychiatric nurses (Scenario A: Low level of resources).
- Create national training centres for psychiatrists, psychiatric nurses, psychologists and psychiatric social workers (Scenario B: Medium level of resources).
- Train specialists in advanced treatment skills (Scenario C: High level of resources).

Source: The World Health Report 2001

Map 8.2 Availability of continuing education programmes in mental health nursing



9

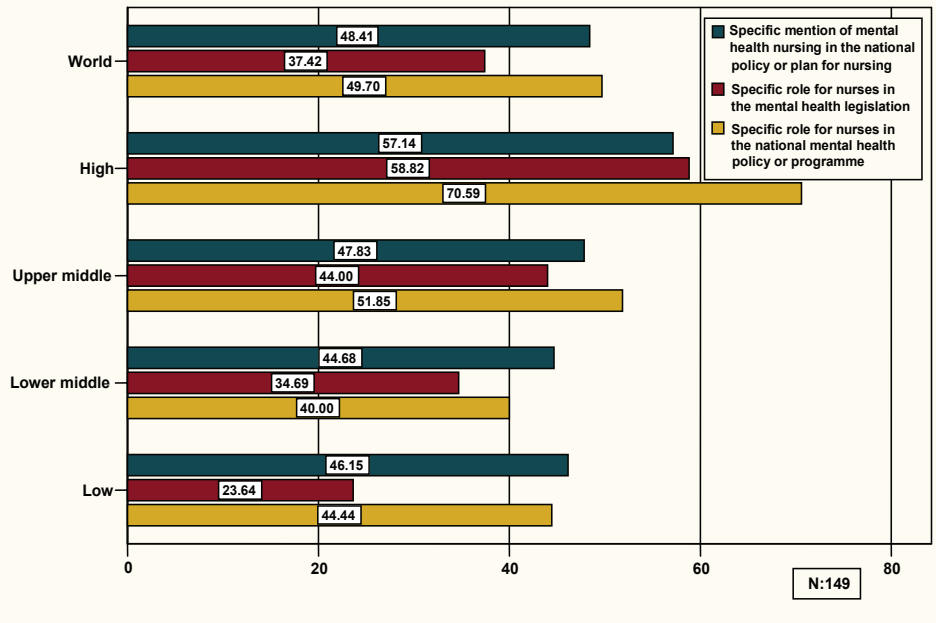
INVOLVEMENT OF NURSES IN MENTAL HEALTH POLICY AND LEGISLATION

On all the questions related to policy and legislation, the responses revealed a positive relationship between income level and the identification of a role for nurses. Higher income countries are more likely to have specified roles for nurses in the establishment of documents related to policies, legislation and plans. There is little difference, however, between high and low income countries on the issue of whether a specific role for nurses is identified in the mental health policy or programme.

There are some differences between high and low income countries on whether or not there is a role for nurses in mental health policy, programmes and legislation.

The importance of creating specific national-level mental health policy and legislation was highlighted. Respondents from several countries commented that mental health issues are not considered a priority within the general political agenda. They indicated that mental health policy, plans and legislation should be updated and the roles and responsibilities of nurses should be included. Nurses need to be involved in this process so that their views are represented.

Figure 9.1 Specific roles for nurses in the national policy, programme and legislation (by country income groups)



Role and functions of mental health nurses in the Caribbean

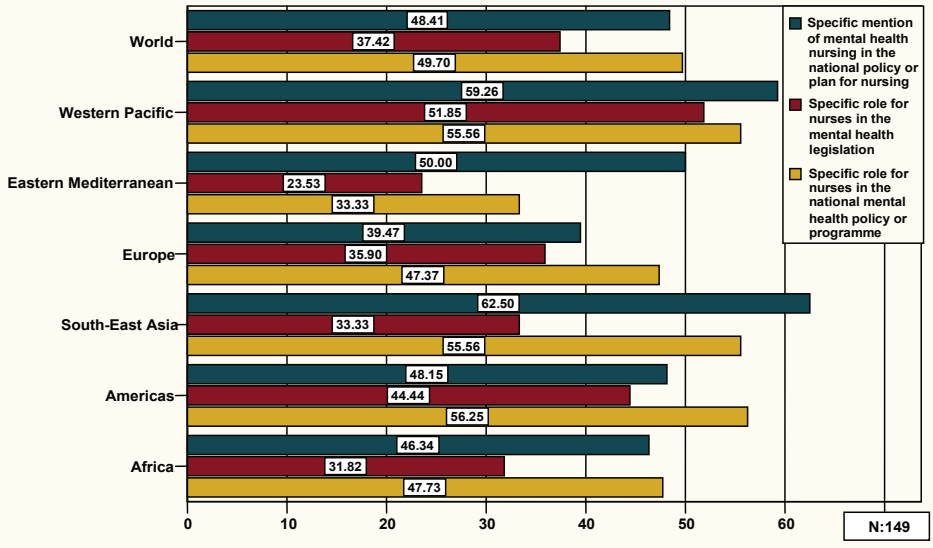
A review of the role and functions of mental health personnel was undertaken in three Caribbean countries: Barbados, Saint Lucia and Trinidad and Tobago. The review, which covered nurses, occupational therapists, physicians, psychologists, recreational therapists, social workers and auxiliary staff such as psychiatric aides, provided a baseline of existing human resources in mental health care and offered recommendations for dealing with regional as well as country-specific issues. The project began by determining existing mental health policies, services and personnel of the participating countries through a survey and the collection of documents from international, regional and national sources. This was followed by on-site visits and interviews with ministry of health representatives, PAHO staff and other informants such as health administrators, mental health practitioners, executive officers of medical, nursing and psychology associations, and auxiliary personnel. The review revealed that the most significant challenges were overcoming the stigma of mental illness; the recruitment, retention and professional development of personnel; and the regulation of health-care practice.

In order to redress both the short-term and long-term situations of psychiatric and mental health nursing in the three countries, basic factors such as faculty/tutor development, availability of appropriate clinical experience and the development of team-building and leadership skills need to be taken into account. Nurses are working in expanded roles in the Caribbean. Examples include mental health officers in Trinidad and Tobago and psychiatric nurse practitioners in Belize. Belize created a training programme for psychiatric nurse practitioners in 1993 and is the only country in the region where systematic evaluation of this model has been conducted.

Education for ethical practice is particularly desirable. Nurses, along with other personnel, must understand and uphold their discipline's code of ethics, e.g. the ICN Code and such guidelines as the 25 principles of the United Nations resolution on the protection of persons with mental illness and the improvement of mental health care. In order to attract students and retain staff, nursing must be allowed to develop to a point where it is a highly recognized and desirable profession. National and regional commitment to a definite plan of action is crucial for nurses to develop their potential to improve mental public health.

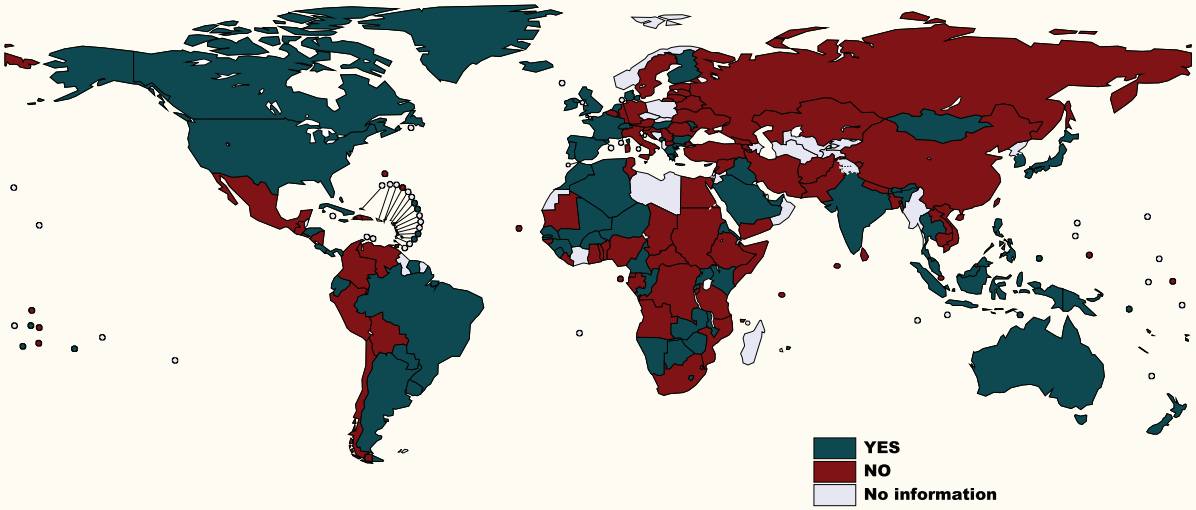
Contributed by Wendy Austin

Figure 9.2 Specific roles for nurses in the national policy, programme and legislation (by WHO regions)



In addition, many respondents called for the development of clear legislation relative to licensing of nurses and accreditation of nursing programmes. For example, some respondents felt that there was a need for governments to provide a set of clear educational standards and qualifications for nurses.

Map 9.1 Specific role for nurses in national mental health policies or programmes



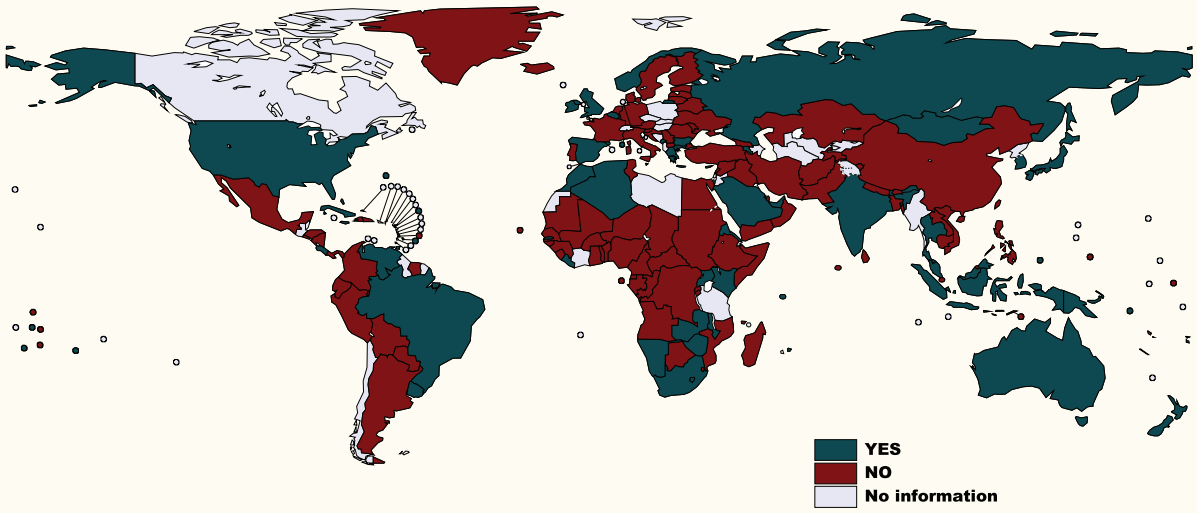
Nurses' role in reform of psychiatric services in Greece

In the context of mental health-care reform initiated with special funding from the European Union (EEC Regulation 815/84), many organizational and administrative changes have taken place in primary, secondary and tertiary psychiatric health care in Greece over the last two decades. These changes inevitably led to the adoption of new therapeutic approaches to the care of people with mental disorders and stimulated the formulation of new roles for the mental health nurse.

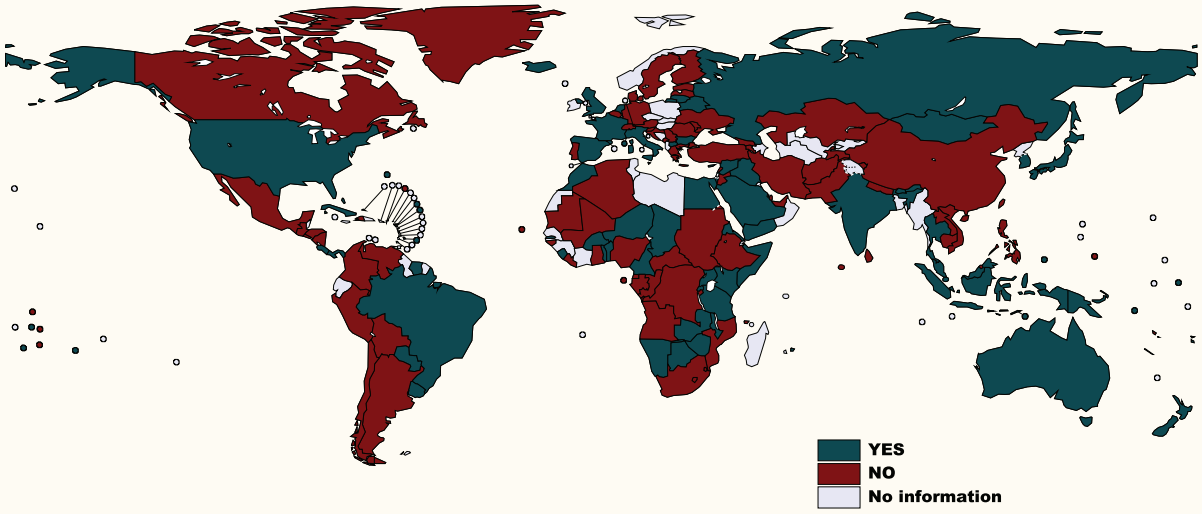
As several "open" structures are established to modernize mental health-care services, the roles of nurses who work in psychiatric services – both nurses without specialized education as well as those with postgraduate training in mental health nursing – expand and evolve, providing clear opportunities to make a difference and improve the quality of care. Despite the overlapping that often occurs in some activities between mental health professionals, the uniqueness of the nursing role is revealed in its holistic approach on a daily basis. Case consultation, administrative consultation and liaison, coordination and crisis intervention, counselling and patient/family education constitute significant roles performed primarily by nurses. Although the Greek health-care system remains medically oriented, and despite the shortage of specialized mental health nurses in both general hospitals and community structures, nurses perform their roles effectively, demonstrating a willingness to change their attitude towards mental illness and to adopt the new approaches to psychiatric care.

Contributed by Thalia Bellali

Map 9.2 Specific role for nurses in mental health legislation



Map 9.3 Inclusion of mental health in national policies or plans for nursing



Role of nurses in mental health policy and planning: Australia and New Zealand

The Australian state of Victoria has developed a comprehensive mental health system that includes small psychiatric wards in general hospitals, residential services and community mental health centres. In common with many countries, Victoria has a current shortage of mental health nurses, and this shortage is expected to increase. In 2000, a Senior Nursing Adviser in Mental Health was appointed to develop a framework for education and training; to promote best practice in mental health nursing; to contribute to workforce planning; to provide professional leadership; and to advise the government on mental health nursing issues.

A systematic approach to recruitment and retention has been developed. Strategies have included ensuring that all student nurses have a clinical placement in mental health settings during their basic training, supporting nurses to develop specialist mental health skills and providing continuing professional development opportunities. A mental health major has been introduced into the basic nursing programme. Student nurses who are interested in working in mental health are able to undertake a generalist nursing course that provides more extensive exposure to mental health settings and encourages students to consider a career as a mental health nurse. To support nurses working in rural areas, education and training clusters have been established that link metropolitan and rural mental health services. As a consequence, nurse educators from urban areas now travel to rural areas to support education and training activities. The development of nurse practitioner roles has resulted in improved patient outcomes and enhanced clinical career pathways in mental health nursing. While still in the developmental phase, nurse practitioner roles are being developed in community mental health services and crisis response teams.

In New Zealand, the National Framework for Mental Health Nursing has been developed to create a sustainable mental health nursing workforce that promotes recovery and reflects best practice. The framework, which was developed in 2005, provides a strategic direction for the future of mental health nursing, with the intention of strengthening both nursing leadership and practice within the multidisciplinary clinical environment. The ministry of health facilitated the establishment of the framework with advice from an expert advisory group made up of 12 people representing the mental health sector. The framework focuses on nine key workforce subjects: nursing leadership, nurse practitioners, standards, skill mix, clinical career pathways, professional supervision, education, research and, recruitment and retention.

The expert advisory group consulted widely during the development of the framework and developed a series of recommendations designed to improve the quality of mental health care and result in overall improved health outcomes for service users. The expert group stressed the importance of stakeholders working together to develop creative recruitment and retention strategies and new ways of working. This is particularly pertinent given that New Zealand is facing increasing demands for mental health services and an alarming shortfall in mental health nurses in the context of escalating global nursing shortages.

Contributed by Margaret Grigg and Frances Hughes

10

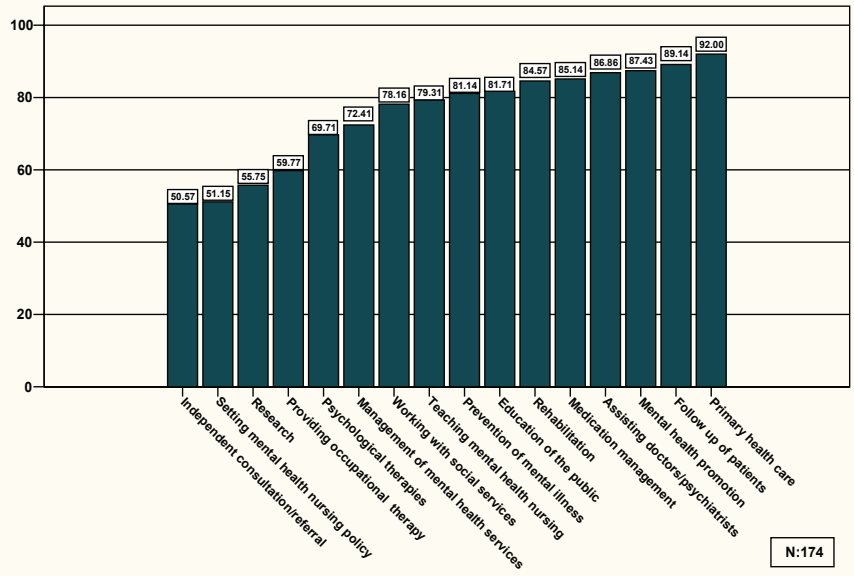
ROLE OF NURSES IN MENTAL HEALTH

This information comes from responses to the question asking whether or not nurses are involved in some specific activities.

The results show that nurses in most countries are involved in all of the activities listed in the questionnaire. Nurses are most likely to be involved in primary care and patient follow-up, as expected. The next most likely activity is mental health promotion, showing that nurses often promote mental health and this may be an indication of the priority nurses assign to mental health.

Some respondents expressed the need to specify

Figure 10.1 Participation of nurses in various activities related to mental health care in the world



"Nurses now carry out roles that were traditionally only for doctors."

– Respondent from Botswana

Nurses providing mental health care in low income settings: Nigeria

In Nigeria, about 25 clinical units are in operation for the care of people with mental disorders: federal health institutions, state hospitals, university departments, general hospitals and – following the primary health care pattern – base clinics or mental health units within the communities. The number of psychiatrists is limited, as a result of which nurses actively provide mental health services in the primary care settings.

The community psychiatric units at the primary health care level are manned mainly by nurses, who provide a range of services from consultation, advice and counselling, psychotherapy, home visits and follow-up to actual treatment of the patients. The psychotherapy usually extends to immediate family caregivers. The nurses also engage in investigating the patient's environment, and liaise between patients and their work environment to ensure that those with jobs retain them and thus ensure their financial security.

The recognition that care of the mentally ill is multifaceted and could be better implemented within community and home settings has facilitated the recent move by the registration body of nurses in Nigeria to review the mental health curriculum. It proposes to provide for specialization at the post-basic level so that nurse specialists could offer more relevant and cost-effective care. Much emphasis is now on preventive and rehabilitative services, with the consequent challenge of training a multidisciplinary health workforce in mental health care that includes psychiatrists, psychologists, occupational therapists, nurses and social workers. The nurses in the communities make referrals to the secondary and tertiary health facilities as situations demand, and record occasional visits to their facilities by psychiatrists. Inversely, patients who are fully stabilized are referred back to the community base clinics for follow-up and home visits.

Contributed by Chika Ugochukwu

the role of nurses within mental health care, e.g. within a nursing care model.

Some respondents were concerned about the quality of care in the community, especially in connection with rehabilitation, follow-up services, family support and education programmes. To meet these demands, some of the respondents proposed a greater involvement of nurses in these activities. The lack of education and social support to family members of patients with mental illness was cited by many respondents, and it was pointed out that these tasks could be completed by nurses. In addition, some respondents expressed the importance of improved family involvement throughout the treatment and rehabilitation processes as well as a need to establish case management programmes for patient follow-up.

Many respondents requested more research and, in particular, research to identify best practices. Furthermore, a number of respondents identified a need to develop research practices in the areas of data collection, monitoring and evaluation and study design. Some respondents also emphasized the importance of increasing nurse participation at national and international conferences.

11

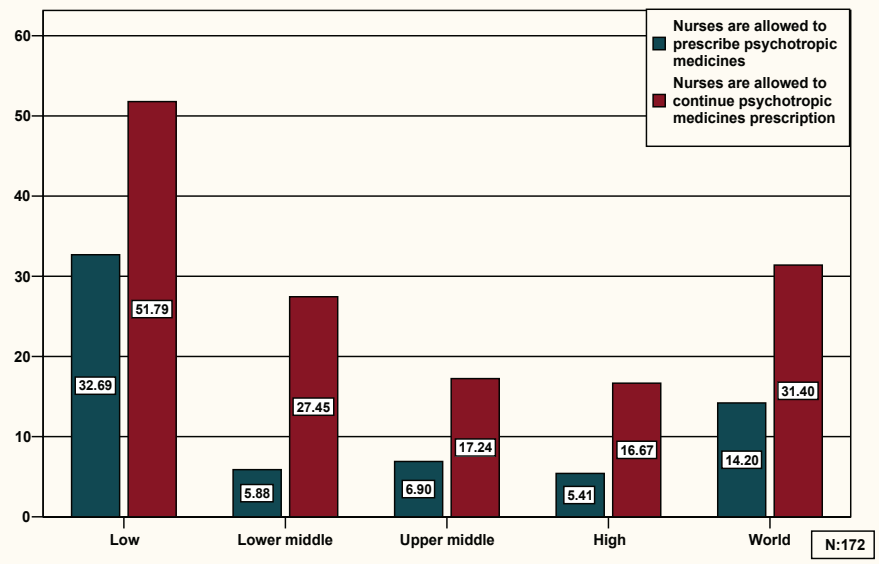
PRESCRIPTION OF PSYCHOTROPIC MEDICINES

Nurses are more likely to be allowed to prescribe and continue prescriptions in low income and African countries than in high income and European countries.

As member of the mental health teams, nurses share the responsibility to prescribe and continue the prescription of psychotropic medicines. This is regulated by International Treaties and national regulations.

Most respondents commented on the tremendous responsibilities of nurses. Nurses are often the only caregivers for patients with mental illness; in many countries they diagnose patients and decide on their treatment. Nurses also manage

Figure 11.1 Prescription of psychotropic medicines by nurses (by country income groups)



"During their work in primary care, when psychiatrists are not available the specialist nurses are the ones who suggest to the physicians the most appropriate medication for the patients. In addition, nurses are the ones to take the lead when negative reactions to medications occur."

– Respondent from Panama

> “Community nurse(s) are already substantially involved in medication management, so if they obtain sufficient knowledge and skills for prescribing this would improve clients’ access to medication, improve compliance, prevent relapse and prove cost effective. Furthermore, prescribing nurses must be authorized by national policy and law.”
>
> – Respondent from Cyprus

A case for psychotropic prescribing by nurses: Fiji

The use of psychotropic medicines to relieve the symptoms of mental health problems has become widespread since their introduction in the 1950s. Nurses have an important role both in the administration of psychotropic medicines and in monitoring clients’ response to treatment. Indeed, the benefits of nurses’ prescribing powers for psychotropic medicines can include improved access to medication; reduced treatment delays and medication costs; improvement in the medication advice provided to clients; and enhanced rates of medication taking.

Nurse prescribing of psychotropics can also benefit areas where there is an ongoing shortage of doctors. This is the case in developing countries such as the small Pacific Island countries where there is a scarcity of resources, including doctors, and where people are often isolated or at great distances from the facilities that are available. Fiji, for example, has one psychiatric in-patient facility of 150 beds located in Suva, which is serviced by one psychiatrist and four medical officers. Currently, all psychotropic medication is distributed from this hospital to clients throughout Fiji, who have to travel to collect their prescriptions from the nearest health facility. The advent of the nurse practitioner role in Fiji was designed to provide greater access to health care for people living in the more remote locations. Nurse practitioners have prescribing authority based on a set of protocols and, in practice, they prescribe drugs as indicated at the time of assessment, although they do not prescribe psychotropic drugs.

In terms of specialist education for mental health nursing in Fiji, in 2006 a new postgraduate course was developed collaboratively by the Fiji Ministry of Health, the Australian Agency for International Development (AusAID), the Fiji School of Nursing, and external consultants. This is the first such course in Fiji. It is currently in progress in order to prepare nurses to be advanced practitioners in the area of mental health nursing. Prior to the introduction of the course, the psychiatric hospital was staffed by registered nurses without specialist qualifications in mental health. As it is important that those who have prescriptive powers are aware of neurosciences and the related drug action and disorder pathology as well as being competent in assessment, treatment and evaluation, the course offered in Fiji may assist in preparing registered nurses to extend and develop their knowledge base and assessment skills in relation to psychotropic medicines. These nurses could be well placed to be offered prescribing authority for psychotropic medications in the future under the guidance of medical practitioners.

Contributed by Kim Usher, Kim Foster and Sai Gadai

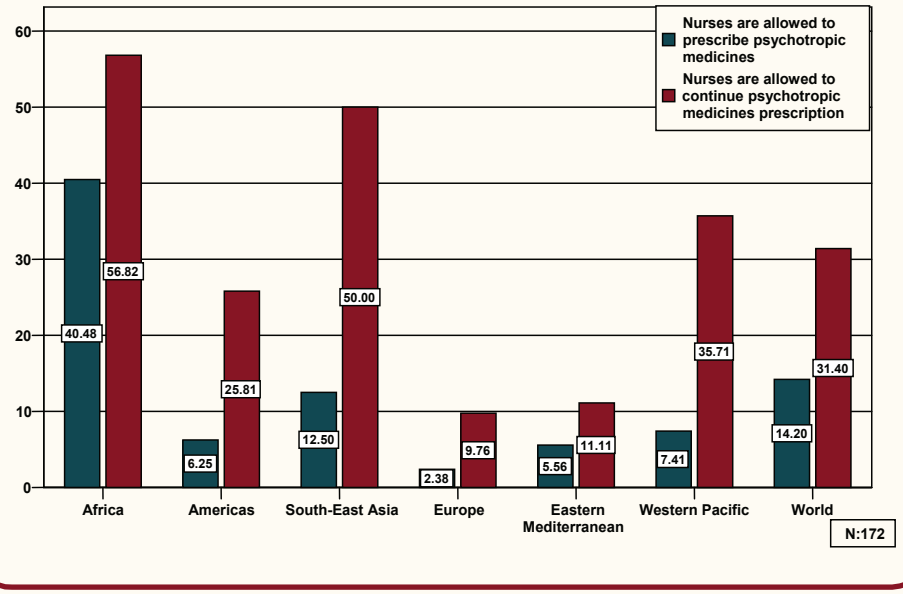
> “Since the development of modern mental health services in the Solomon Islands in the early 1950s, it is nurses who assess, diagnose and treat mental patients. We are currently training our local psychiatrist ... However, according to the Mental Treatment Act, nurses are not allowed to prescribe drugs; but who else will do it? Legislation has to be changed immediately.”
>
> – Respondent from Solomon Islands

patient wards and conduct follow-up care in the community. In addition, several respondents mentioned that nurses are commonly working in areas outside their clinical area of expertise.

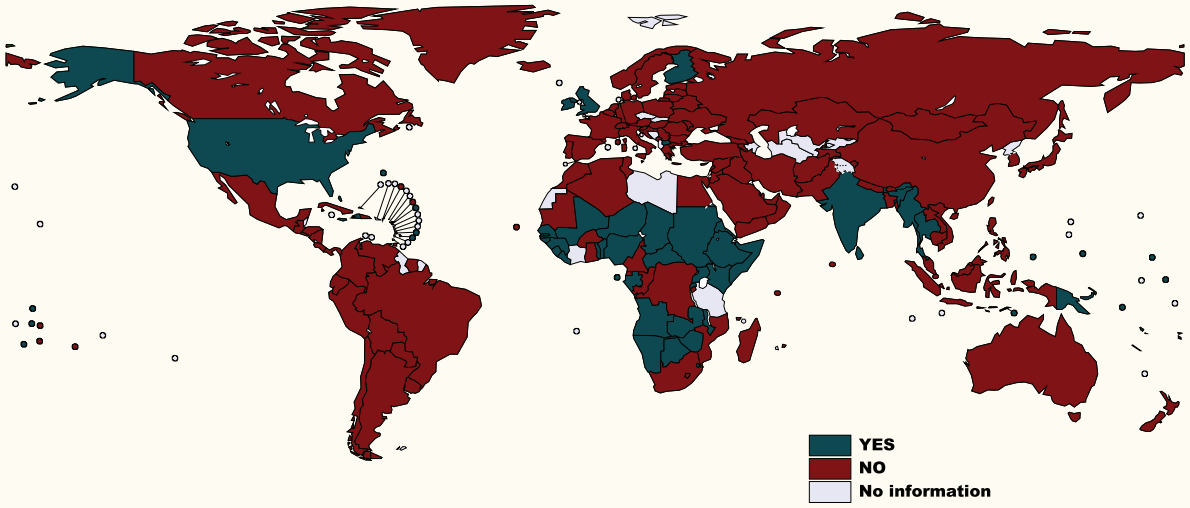
On the other hand, many respondents expressed concern at the lack of recognition and limited authority accorded to nurses. For example, many respondents reported that nurses are rarely involved in policy and planning even though they are often the primary caregivers. Furthermore, they are often not authorized to prescribe medication. These issues contribute to concerns that the contributions from nurses are undervalued and unappreciated.

Consequently, many respondents state that nurses should have increased decision-making authority and responsibility, such as assessing patients, prescribing medication, and directly managing mental health services.

Figure 11.2 Prescription of psychotropic medicines by nurses (by WHO regions)



Map 11.1 Nurses authorized to prescribe or continue psychotropic medicines



"In Ethiopia, nurses work replacing physicians in many places. There are no officially written regulations delegating nurses to prescribe (or not to prescribe) psychotropics. However, the clear fact is that registered nurses are allowed officially to run "medium clinics" and they do prescribe psychotropic medications in this country with our full knowledge."

– Respondent from Ethiopia

DISCUSSION AND CONCLUSIONS

We believe that this is the first detailed study of nurses in mental health around the world. Nurses are the primary service providers in health systems in most countries, and most mental health services are provided through primary health systems. Consequently, the lack of good information on nurses in mental health has made it difficult for countries to evaluate the current level of mental health services and even more difficult to plan for improvements. The data from this report should be useful to countries in restructuring and improving services. The high response rate (177 completed questionnaires) and good coverage of all WHO regions helps to add credibility to the information collected.

The World Health Report 2006 indicates that there are about 39 million health service providers around the world, 16 million (41%) of whom are nurses. The report suggests that the insufficient number of health service providers is one of the primary barriers to good health. WHO estimates that there is a shortage of more than 2.4 million health service providers in the 57 countries where the shortfall is most critical. Since 41% of the health workforce are nurses, it is reasonable to assume that the nursing shortage in these 57 countries is approximately 1 million nurses (41% of 2.4 million). The report also indicates that this workforce crisis is likely to get worse because "the global population is growing, but the number of health workers is staying the same or even falling in many of the places where they are needed most".

The *Atlas: Nurses in Mental Health 2007* confirms that there are not enough nurses in low and middle income countries. In fact, one of the primary observations from the data is that there is a serious shortage of nurses working in mental health in these countries. This finding is true for nurses in all mental health settings as well as for nurses in mental hospitals, psychiatric units of general hospitals, and community mental health settings. While the shortages are global, geographical regions with numerous low and middle income countries also have fewer nurses per capita in mental health settings.

Comments in response to the open-ended questions also suggest that the overall nursing shortage is a factor in explaining insufficient numbers of nurses in mental health. Respondents say that this shortage is even more acute for nurses in mental health because of the lack of incentives for nurses to be trained to provide mental health services. There are few financial incentives for nurses either to receive mental health training or to provide mental health services. The stigma of mental illness also contributes to this problem by limiting the number of nurses willing to make mental health nursing a career.

There is one result that appears to contradict this finding: in African countries and low income countries a high proportion of the nurses in mental health settings have mental health training. Upon further inspection, however, this result becomes quite predictable. Africa has very few nurses (1.10 per 1000 population compared with 7.45 per 1000 population in Europe); Africa also has a very low number of mental health settings and few nurses in these settings (0.32 per 100 000 population compared with 26.76 per 100 000 population in Europe). Consequently, in Africa the proportion of nurses with mental health training is high but the number of nurses in mental health settings is very low. This same phenomenon is found in other low income countries.

Several other themes emerge from the data. The level of training in low and middle income countries is usually less than that in high income countries. A larger proportion of high income countries include comprehensive training in their undergraduate nursing programmes, and student nurses in high income countries receive more training in mental health facilities during their undergraduate training. These results are expected, as there are fewer mental health facilities and training opportunities in low income countries. The biggest discrepancy between high and low income countries, however, relates to whether or not students can gain experience in a community mental health setting. Over 80% of high income countries provide this experience, against only 46% of low income countries. This result highlights the limited number of community mental health settings in low income countries.

Analysis of the data by WHO regions confirms these findings. Europe, the region with the highest number of high income countries, has by far the largest number of nurses per capita working in mental health settings. In fact, the rate for Europe is over six times higher than for every other region.

Another finding is that there are more high income countries that have identified a role for nurses in their national mental health policy and legislation. Also, high income countries have more nurses involved in "social services" than do the low income countries. This result is consistent with the finding that more nurses in high income countries have been trained in community mental health settings: community settings are more likely to be involved in social service activities.

One of the most interesting and least expected results is that nurses have more authority to prescribe medication and to continue prescriptions in low income countries and in Africa, South-East Asia and the Western Pacific. This result is likely to be attributable to the limited number of physicians available to prescribe medications in these countries.

Some of the same themes emerge from the comments elicited by the open-ended questions. Many respondents indicate that nursing in mental health is an important and neglected issue. They report that mental health nursing does not seem to be a priority for decision-makers or education systems; consequently there is not enough mental health training for nurses in both basic and post-basic education programmes. It is difficult for countries to recruit and train nurses for mental health care. The stigma of mental illness, the working conditions, and the lack of incentives for providing mental health care make the recruitment of nurses for mental health more difficult. This difficulty is exacerbated in low income countries where the nursing shortage is most acute. Finally, the comments support the data that suggest that there is not enough mental health care in primary health services in the community.

All of these conclusions point to a very serious problem for nurses and mental health in low income countries. There are few nurses in these countries and therefore few nurses in mental health settings. Further, the mental health training in these countries is far from adequate and some low income countries provide little or no mental health training for nurses. As low and middle income countries struggle to improve mental health services, these issues will need to be confronted and resolved.

THE WAY FORWARD

The following steps need to be taken to improve mental health care by nurses.

1. Recognize nurses as essential human resources for mental health care

Nurses play a key role in the care of people with mental disorders; this role needs to be recognized and incorporated into the overall plans for mental health in all countries.

Nurses, with appropriate training, can perform a much wider variety of functions within mental health services than they are currently allotted. Nurses have to be able to provide mental health care in the community, as community services should be the most easily accessible form of care. The role of nurses ought to be expanded to incorporate assessment, clinical care and follow-up, using psychosocial and pharmacological interventions. Nurses should be fully involved in the development of policy, plans and legislation and service programmes. These functions for nurses are even more important in countries where mental health professionals are scarce. Also, the comments suggest that respondents are concerned about the limited authority of well-trained nurses.

There is need for re-evaluation of the role of nurses in providing psychotropic medications. In most low and middle income countries there are not enough professionals to prescribe and dispense medications. Many of the comments cited a serious problem with regard to this situation: in fact, several of the respondents indicated that nurses and other providers are functioning beyond their scope of practice in prescribing and dispensing essential psychotropic medicines, but do so because there is no other way to get medications to the people who need them. Respondents also noted a problem with the cost and availability of medications. Public health planners need to investigate cost and availability as well as provider issues, including expanding the scope of practice of well-trained nurses.

2. Ensure that adequate numbers of trained nurses are available to provide mental health care

There is a need for more nurses with appropriate mental health training in low and middle income countries. In most of these countries, the number of nurses with formal training in mental health is far less than the number of nurses working in mental health settings. In view of the severe deficiency of other mental health personnel in these countries, the role of nurses becomes even more critical.

There is a need to implement strategies aimed at better recruitment and retention of mental health nurses especially in low and middle income countries. These strategies should include evaluating compensation packages, as well as determining whether nurses' authority levels are appropriate for their level of responsibility and creating a positive and supportive workplace environment.

The stigma associated with mental illness was well documented in *The World Health Report 2001*. Equally important, however, is the stigma or low status associated with mental health-care providers, including nurses. Countries should implement strategies to encourage nurses to consider mental health as a career choice.

3. Incorporate a mental health component into basic and post-basic nursing training

Mental health must be an essential ingredient of training for all nurses. Mental health training is a necessary prerequisite for the provision of mental health care, but is also important for a holistic approach to general nursing care.

Because there are no standards for the content of mental health training in basic nursing programmes, countries' curricula vary considerably on what is included. Surprisingly, there are some basic nurse training programmes that do not include any training for mental health. Nurse training programmes should consider including the following components specifically related to mental health: assessment, treatment, psychosocial interventions, rehabilitation, ethical and legal issues, prevention and promotion, and research.

Recommended Reading

- *The World Health Report 2006 – Working together for health*. Geneva, World Health Organization, 2006.
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- *ILO Nursing Personnel Convention No. 149*. Geneva: International Labour Office; 2005.
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- *The World Health Report 2001 – Mental health: new understanding, new hope*. Geneva, World Health Organization, 2001.

APPENDIX 1
LIST OF RESPONDENTS

PARTICIPATING WHO MEMBER STATES, AREAS OR TERRITORIES	RESPONDENTS
Afghanistan	Sayed Azimi
Algeria	Luiza Asloun
American Samoa	Matamuli Punimata
Angola	Allinio Bumene
Antigua and Barbuda	Cicely Dorsett
Argentina	Patricia Fabiana Gómez
Armenia	Samvel Torosyan
Australia	Elizabeth Foley
Austria	Josef Brueckmueller
Bahamas	Mary L. Johnson
Bahrain	A. Jabbar Essa A. Isa Rula Al-Saffar
Bangladesh	Ira Dibra
Barbados	Jacqueline Benn Rodney Toppin
Belarus	Pavel Rynkov
Belgium	Bert Folens Pierre Mestre
Benin	Eugénie Degla Dossou Josiane Ezin Houngbe
Bermuda	Patrice Dill
Bhutan	Tandin Pemo
Bolivia	Elba Olivera Choque
Botswana	Geetha Feringa
Brazil	Antonia Regina Ferreira Furegato
British Virgin Islands	Bernet Scatliffe
Brunei Darussalam	Hj Abd Hamit Hj Musa
Bulgaria	Milka Atanassova Vasileva

Burkina Faso	A. Valian
Burundi	Nduwayo Polycourpe
Cambodia	Ang Sody
Cameroon	Jean Junang
Canada	Christine Davis
Cape Verde	Maria Francisca Tavares Alvarenga
Central African Republic	André Tabo
Chad	Egip Bolsane Françoise Alzouma Zénaba
Chile	Gloria Mejías
China	YanHong Guo
China, Hong Kong Special Administrative Region	June Wing Mui Lui Georgina Ho
Colombia	Esperanza Morales Correa
Congo	Alain Mouanga
Comoros	Nassuri Ahamada
Cook Islands	Neti Tamarua Herman
Costa Rica	Virian Mejías Padilla
Côte d'lvoire	R.C. Joseph de Lafosse
Croatia	Branka Rimac
Cuba	Ermis Isaac Álvarez
Cyprus	Anastasia Argyrou
Democratic Republic of the Congo	Henriette Eke Otshitshi
Denmark	Ea Trane Jørn Eriksen Anne Danielsen Kjærgaard
Dominican Republic	Dulce Emilia Medina
Ecuador	Lourdes Carrera Carmen Falconí
Egypt	Mohamed Ghanem
El Salvador	Helena Reyes de Guzmán Lorena Rosales de Bonilla
Equatorial Guinea	Mercedes Bori Boható
Eritrea	Menghestab Gaim
Estonia	Janika Pael
Ethiopia	Menelik Desta Sisay Endale
Fiji	Rigieta Nadakuitavuki
Finland	Irma Kiikkala Antti Tuomi-Nikula
France	Marie Claude Marel Christine Lemeux Marie Ange Coudray Jean François Negri

Gabon	Frédéric Mbumgu Mabiala
Gambia	Bakary Sonko
Georgia	Manana Sharashidze
Germany	Franz Wagner
Ghana	Veronica Darko
Greece	Christina Ouzouni
Guatemala	Rhina Orantes de De León
Guinea	Mariama Barry
Guinea-Bissau	Tito Martinho Lima
Haiti	Marie P. Chery
Honduras	Reina Lidylia Grogan Nuñez
Hungary	Zimányi-Tunyi Tünde
Iceland	Sigríður Hafberg Ína Rós Jóhannesdóttir
India	T. Dileep Kumar
Indonesia	Rukiah Siregar Budi Anna Keliat
Iran (Islamic Republic of)	Rafat Rezapour Ghazanfar Mirzabeigi
Iraq	Salmman Hussein Faris Salih Hasnawi
Ireland	Annette Kennedy
Israel	Judith Bornstein
Italy	Angela Lolli Yvonne Bonner Stefano Mastrangelo
Jamaica	Valda Lawrence-Campbell
Japan	Keiko Okaya
Jordan	Abu Islaieh Nabhan
Kazakhstan	Nurgul K.Khamzina
Kenya	Lawrence Njau Kibue
Kiribati	Teramira Schutz
Kuwait	Awatef Al Qattan
Lao People's Democratic Republic	Sthaphone Insisienmay Aphone Visathep
Latvia	Maris Taube
Lebanon	Ziad Mansour
Lesotho	Mathaabe Cecilia Ranthimo
Liberia	Dedeh Jones
Lithuania	Ona Davidoniene
Madagascar	Sonia Randrianarison
Malawi	Immaculate Chamangwana

Malaysia	Hjh. Bibi Florina Abdullah
Maldives	Aminath Saeed Firag
Mali	Baba Koumaré
Malta	Colin Galea
Marshall Islands	Cathelina Antolok Freddy Langrine
Mauritania	Kane Amadou Racine
Mauritius	Francis Supparayen
Mexico	Elena García Sánchez Juana Jiménez Sánchez Rosa Zarate Grajales
Micronesia (Federated States of)	Agnes Willyander
Monaco	Iris L'Héritier
Mongolia	Gombodorj Tsetsegdari Surenkhorloo Altanbagana
Montenegro	Zorica Barac-Otasevic
Montserrat	Desreen Silcott
Morocco	Dris Chennaq
Mozambique	Paulo Andrassone
Myanmar	Daw Phyu Phyu
Namibia	A. Barandonga
Nepal	Tara Pokharel Chandrakala Sharma Ishwori Khanal
Netherlands	Jurian Luiten
New Zealand	Susanne Trim
Nicaragua	Migdalia Chávez Solís
Niger	Harouna Fatoumata
Nigeria	Chika G.Ugochukwu
Niue	Keteligi Fereti
Norway	Freja Ulvestad Kärki
Oman	Frank A. Lyons
Pakistan	Nisab Akhtar
Palau	Julita Tellei
Panama	Aldacira de Bradshaw
Papua New Guinea	Mary Roroi
Paraguay	María Catalina Roa Martínez
Peru	Nancy Arévalo Zurita María Concepción Pezo Silva
Philippines	Lucila O. Espinosa Maria Rita V. Tamse
Poland	Dorota Kilańska

Portugal	Glória Tolleti
Qatar	Nabila Almeer
Republic of Korea	Ko Moon - Hee
Republic of Moldova	Anatoliy Nakou
Romania	Mircea Timofte Mihaela Hrestic
Russian Federation	Valentina Sarkisova
Rwanda	Karasira Astérie
Saint Lucia	Juliette Mondesir
Samoa	Eseta Hope
Sao Tome and Principe	Flavio Castelo David dos Santos Andrade Marta Possu Nelsom Cravid do Sacramento
Saudi Arabia	Muneera Al Osaimi
Senegal	Mamadou Habib Thiam
Serbia	Milijana Matijevic Danijela Savic Tatjana Joksimovic Nikolic Brahislava
Seychelles	D. Malulu G. Michel
Sierra Leone	Marina Oduyent John
Singapore	Susie Kong Pauline Tan
Slovenia	Darja Cibic Veronika Pretnar Kunstek
Solomon Islands	William Same
Somalia	Omar Mohamoud Ibrahim Asia Osman Ahmed
South Africa	Nelouise Geyer
Spain	Rafael Lletget Alina Souza
Sri Lanka	Dharma de Silva
Sudan	Zeinat Bella M. A. Sanhori
Suriname	H. Molin
Swaziland	Nonhlanhla A Sukati
Sweden	Stefan Lundberg
Switzerland	Catherine Panchaud
Syrian Arab Republic	Lama Hamish Ahmad
Tajikistan	Zukhra Abdurachmanova
Thailand	Jintana Yunibhand
The former Yugoslav Republic of Macedonia	Velka Lukic Duska Crvenova
Timor-Leste	Teofilo Julio K. Tilman
Togo	Sanwogou Dedamani

Tokelau	F. Faafoi
Tonga	Ana Kanaeriari
Trinidad and Tobago	Kelvin Antoine
Tunisia	Alaoui Faygel
Turkey	Nurhan Eren GülŞen Terakye
Uganda	Sheila Ndyanabangi
Ukraine	Igor Martsenkovs
United Arab Emirates	Ghada Sherry
United Kingdom of Great Britain and Northern Ireland	Ian Hulatt
United Republic of Tanzania	Clavery P. Mpamdama
United States of America	John F. Garde Cheryl A. Peterson
Uruguay	Margarita Garay Silvia Meliá
Vanuatu	Barry Saniel
Venezuela (Bolivarian Republic of)	María Navarro de Saez
Viet Nam	Pham Duc Muc
Yemen	Saleh Ghanim
Zambia	Jennifer M. Munsaka
Zimbabwe	Dorcas Shirley Sithole Cynthia M. Z. Chasokela

APPENDIX 2
QUESTIONNAIRE

ATLAS: NURSES IN MENTAL HEALTH 2007

COUNTRY QUESTIONNAIRE

1. Number of nurses

1.1 How many registered or first-level nurses are available in your country? (This should be the total number of nurses) ☐

1.2 How many nurses work in primary health care? (Do not include nurses working in mental health settings) ☐

1.3 How many nurses with formal training in psychiatric/mental health nursing are available in your country? (Please include only nurses who have completed formal training in mental health) ☐

Please indicate how many nurses (whether they have mental health training or not) work in the following mental health settings in your country:

1.4 Mental or psychiatric hospitals ☐

1.5 Psychiatric units in general hospitals ☐

1.6 Community mental health (not in hospitals) ☐

2. Education

2.1 Is education in mental health/psychiatric nursing available in undergraduate/basic nursing courses?

Yes: ☐ No: ☐

If YES, please complete a – e:

a. Total hours for all theory in all courses ☐

b. Total hours for theory on mental health ☐

c. Total days for clinical experience ☐

d. Total days for mental health clinical experience ☐

Please check all that apply:

Is this experience in a mental or psychiatric hospital? ☐
Is this experience in a psychiatric unit in a general hospital? ☐
Is this experience in a community mental health setting (outside of hospital)? ☐

e. Areas covered by education (please check all that apply):

Assessment (signs and symptoms of mental disorders) ☐
Treatment ☐
Rehabilitation ☐
Ethical and legal issues ☐
Prevention and promotion of mental health ☐
Research on mental health ☐
Other (please specify) ☐

2.2 Are nurses with undergraduate nursing education allowed to practice as mental health/psychiatric nurses?

Yes: ☐ No: ☐

2.3 Is formal specialist post-basic education for mental health/psychiatric nursing available in the country?

Yes: ☐ No: ☐

If yes, please fill in the grid:

Total Weeks of Mental Health Training; Weeks of Theory; Weeks of Clinical Experience

Diploma level	Total Weeks of Mental Health Training	Weeks of Theory	Weeks of Clinical Experience
Post-basic			
BSc degree			
Master's degree			
Doctorate degree			

2.4 Areas covered by any of the education programmes (please check all that apply)

- Assessment (signs and symptoms of mental disorders) ☐
- Treatment ☐
- Rehabilitation ☐
- Ethical and legal issues ☐
- Prevention and promotion of mental health ☐
- Research on mental health ☐
- Other (please specify) ☐

2.5 Other than formal education, are there any continuing education programmes for nurses in mental health/psychiatric nursing?

Yes: ☐ No: ☐

3. Role of nurses

3.1 Nurses are involved in the following areas (please check all that apply):

- Mental health promotion ☐
- Education of the public ☐
- Prevention of mental illness ☐
- Primary health care ☐
- Medication management ☐
- Psychological therapies ☐
- Rehabilitation ☐
- Independent nursing consultation/referral ☐
- Assisting doctors/psychiatrists in consultation ☐
- Follow-up of patients ☐
- Working with social services ☐
- Providing occupational therapy services/referral ☐
- Management of mental health services ☐
- Teaching mental health/psychiatric nursing ☐
- Research ☐
- Setting mental health/psychiatric nursing health policy ☐
- Other ☐

Comments:

4. Involvement in policy and legislation

4.1 Is there any specific role for nurses in the national mental health policy or programme?

Yes: ☐ No: ☐ There is no national policy ☐ Don't know ☐

4.2 Is there any specific role for nurses in mental health legislation?

Yes: ☐ No: ☐ There is no mental health legislation ☐ Don't know ☐

4.3 Is there any specific mention of mental health nursing in the national policy or plan for nursing?

Yes: ☐ No: ☐ There is no national policy or plan for nursing ☐ Don't know ☐

4.4 Can nurses prescribe psychotropic medicines under the national laws?

Yes: ☐ No: ☐ Don't know ☐

4.5 Once prescribed by a physician, can nurses continue psychotropic medicine prescription under the national laws?

Yes: ☐ No: ☐

Comments

5. Key issues

5.1 What are the key issues for nurses providing mental health care in your country?

5.2 What international support is needed to develop the nursing workforce for mental health/psychiatric nursing in your country?

6. Any additional comments

Thank you for your participation.

APPENDIX 3

PARTICIPATING WHO MEMBER STATES, AREAS OR TERRITORIES

WHO MEMBER STATES, AREAS OR TERRITORIES	WHO REGION	INCOME CATEGORY
Afghanistan	Eastern Mediterranean	Low
Algeria	Africa	Lower middle
American Samoa	Americas[1]	Upper middle[2]
Angola	Africa	Low
Antigua and Barbuda	Americas	Upper middle
Argentina	Americas	Upper middle
Armenia	Europe	Lower middle
Australia	Western Pacific	High
Austria	Europe	High
Bahamas	Americas	High
Bahrain	Eastern Mediterranean	High
Bangladesh	South-East Asia	Low
Barbados	Americas	Upper middle
Belarus	Europe	Lower middle
Belgium	Europe	High
Benin	Africa	Low
Bermuda	Europe[1]	High
Bhutan	South-East Asia	Low
Bolivia	Americas	Lower middle
Botswana	Africa	Upper middle
Brazil	Americas	Lower middle
British Virgins Islands	Europe[1]	High
Brunei Darussalam	Western Pacific	High
Bulgaria	Europe	Lower middle
Burkina Faso	Africa	Low
Burundi	Africa	Low

Cambodia	Western Pacific	Low
Cameroon	Africa	Low
Canada	Americas	High
Cape Verde	Africa	Lower middle
Central African Republic	Africa	Low
Chad	Africa	Low
Chile	Americas	Upper middle
China	Western Pacific	Lower middle
China, Hong Kong Special Administrative Region	Western Pacific[1]	High
Colombia	Americas	Lower middle
Congo	Africa	Low
Comoros	Africa	Low
Cook Islands	Western Pacific	Lower middle[2]
Costa Rica	Americas	Upper middle
Côte d'Ivoire	Africa	Low
Croatia	Europe	Upper middle
Cuba	Americas	Lower middle
Cyprus	Europe	High
Democratic Republic of the Congo	Africa	Low
Denmark	Europe	High
Dominican Republic	Americas	Lower middle
Ecuador	Americas	Lower middle
Egypt	Eastern Mediterranean	Lower middle
El Salvador	Americas	Lower middle
Equatorial Guinea	Africa	Low
Eritrea	Africa	Low
Estonia	Europe	Upper middle
Ethiopia	Africa	Low
Fiji	Western Pacific	Lower middle
Finland	Europe	High
France	Europe	High
Gabon	Africa	Upper middle
Gambia	Africa	Low
Georgia	Europe	Lower middle
Germany	Europe	High
Ghana	Africa	Low
Greece	Europe	High
Guatemala	Americas	Lower middle
Guinea	Africa	Low

Guinea-Bissau	Africa	Low
Haiti	Americas	Low
Honduras	Americas	Lower middle
Hungary	Europe	Upper middle
Iceland	Europe	High
India	South-East Asia	Low
Indonesia	South-East Asia	Lower middle
Iran (Islamic Republic of)	Eastern Mediterranean	Lower middle
Iraq	Eastern Mediterranean	Lower middle
Ireland	Europe	High
Israel	Europe	High
Italy	Europe	High
Jamaica	Americas	Lower middle
Japan	Western Pacific	High
Jordan	Eastern Mediterranean	Lower middle
Kazakhstan	Europe	Lower middle
Kenya	Africa	Low
Kiribati	Western Pacific	Lower middle
Kuwait	Eastern Mediterranean	High
Lao People's Democratic Republic	Western Pacific	Low
Latvia	Europe	Upper middle
Lebanon	Eastern Mediterranean	Upper middle
Lesotho	Africa	Low
Liberia	Africa	Low
Lithuania	Europe	Upper middle
Madagascar	Africa	Low
Malawi	Africa	Low
Malaysia	Western Pacific	Upper middle
Maldives	South-East Asia	Lower middle
Mali	Africa	Low
Malta	Europe	High
Marshall Islands	Western Pacific	Lower middle
Mauritania	Africa	Low
Mauritius	Africa	Upper middle
Mexico	Americas	Upper middle
Micronesia (Federated States of)	Western Pacific	Lower middle
Monaco	Europe	High
Mongolia	Western Pacific	Low
Montserrat	Americas[1]	Lower middle[2]

Montenegro	Europe	Upper middle
Morocco	Eastern Mediterranean	Lower middle
Mozambique	Africa	Low
Myanmar	South-East Asia	Low
Namibia	Africa	Lower middle
Nepal	South-East Asia	Low
Netherlands	Europe	High
New Zealand	Western Pacific	High
Nicaragua	Americas	Low
Niger	Africa	Low
Nigeria	Africa	Low
Niue	Western Pacific[1]	Lower middle[2]
Norway	Europe	High
Oman	Eastern Mediterranean	Upper middle
Pakistan	Eastern Mediterranean	Low
Palau	Western Pacific	Upper middle
Panama	Americas	Upper middle
Papua New Guinea	Western Pacific	Low
Paraguay	Americas	Lower middle
Peru	Americas	Lower middle
Philippines	Western Pacific	Lower middle
Poland	Europe	Upper middle
Portugal	Europe	High
Qatar	Eastern Mediterranean	High
Republic of Korea	Western Pacific	High
Republic of Moldova	Europe	Low
Romania	Europe	Lower middle
Russian Federation	Europe	Lower middle
Rwanda	Africa	Low
Saint Lucia	Americas	Upper middle
Samoa	Western Pacific	Lower middle
Sao Tome and Principe	Africa	Low
Saudi Arabia	Eastern Mediterranean	Upper middle
Senegal	Africa	Low
Serbia	Europe	Upper middle
Seychelles	Africa	Upper middle
Sierra Leone	Africa	Low
Singapore	Western Pacific	High
Slovenia	Europe	High

Solomon Islands	Western Pacific	Low
Somalia	Eastern Mediterranean	Low
South Africa	Africa	Lower middle
Spain	Europe	High
Sri Lanka	South-East Asia	Lower middle
Sudan	Eastern Mediterranean	Low
Suriname	Americas	Lower middle
Swaziland	Africa	Lower middle
Sweden	Europe	High
Switzerland	Europe	High
Syrian Arab Republic	Eastern Mediterranean	Lower middle
Tajikistan	Europe	Low
Thailand	South-East Asia	Lower middle
The former Yugoslav Republic of Macedonia	Europe	Lower middle
Timor-Leste	South-East Asia	Low
Togo	Africa	Low
Tokelau	Western Pacific[1]	Lower middle[2]
Tonga	Western Pacific	Lower middle
Trinidad and Tobago	Americas	Upper middle
Tunisia	Eastern Mediterranean	Lower middle
Turkey	Europe	Lower middle
Uganda	Africa	Low
Ukraine	Europe	Lower middle
United Arab Emirates	Eastern Mediterranean	High
United Kingdom of Great Britain and Northern Ireland	Europe	High
United Republic of Tanzania	Africa	Low
United States of America	Americas	High
Uruguay	Americas	Upper middle
Vanuatu	Western Pacific	Lower middle
Venezuela (Bolivarian Republic of)	Americas	Upper middle
Viet Nam	Western Pacific	Low
Yemen	Eastern Mediterranean	Low
Zambia	Africa	Low
Zimbabwe	Africa	Low

1 Associated Member, areas and territories that are not WHO Member States.

2 These income categories were based on each country's Gross Domestic Product (GDP) per capita in 2006 from the International Monetary Fund.

Country income groups are established according to 2003 gross national income (GNI) per capita, calculated using the World Bank Atlas method. The groups are: low income, $765 or less; lower middle income,$766–3,035; upper middle income, $3,036–9,385; and high income, $9,386 or more.

Even though mental health nursing is a critical issue for most countries, there has been very little published information in this area. This report from the World Health Organization (WHO) and the International Council of Nurses (ICN) summarizes information on nurses and mental health collected from respondents from 172 countries around the world.

The number of nurses involved in mental health care and their level of training are inadequate, especially in low and middle income countries. Also, there are fewer community mental health facilities in low and middle income countries and a higher percentage of the mental health nurses work in mental hospitals in these countries. Across the countries, nurses play varied roles in mental health care including participation in primary health care, follow up of patients, mental health promotion and assisting practitioners/psychiatrists.

Atlas: Nurses in Mental Health makes the following recommendations:

- Recognize nurses as essential human resources for mental health care
- Ensure that adequate numbers of trained nurses are available to provide mental health care
- Incorporate a mental health component in basic and post basic nursing training

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