

Mapping the Research Activity on Psychiatric Disorders in Bahrain: A 40-Year Analysis

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Objective: To map all the published, unpublished and ongoing psychiatric research in the Kingdom of Bahrain over the past 40 years.

Design: A Scoping Review.

Setting: Ministry of Health, Bahrain.

Method: Data were collected by electronic database search including Medline, EMBASE, Scopus (1980-2019), personal contact, and records of the secondary health care research committee. Researches were tabulated according to type, design, target population, and clinical categories.

Result: Six hundred fifty-three published papers, 37 unpublished reports, and 17 ongoing projects were reviewed. Number (80%) were published between 2015 and 2019. General adult psychiatry papers constituted 275 (38.9%) followed by geriatric psychiatry, 154 (21.8%). The majority of published material was describing health services in 472 (66.8%) followed by epidemiology prevalence in 157 (22.2%) and diagnosis and treatment in 24 (3.4%). Two hundred thirty-five (33.2%) of research addressed depressive disorders, 124 (17.5%) schizophrenia, 86 (12.2%) attention deficit hyperactivity disorder, 92 (13%) autism spectrum disorder, 84 (11.9%) bipolar disorder and 32 (4.5%) dementia. Studies utilized cross-sectional design in 585 (82.7%), 42 (5.9%) case-controls and 25 (3.5%) systematic review and meta-analysis.

Conclusion: Long-term follow-up studies, cohort, national prevalence rate of disorders, and clinical trials were lacking. The performance evaluation of staff for promotion and future training opportunities should have a component of research productivity.

INTRODUCTION

Mental and behavioral disorders are common and include a significant disease burden globally. Nonetheless, mental and behavioral disorders receive less funding and attention from researchers and research institutes than other medical conditions¹.

Generally, research has four objectives: exploration, description, explanation, and application. People perform research for different reasons; the majority of researchers conduct studies to answer theories or advance knowledge in one particular field. The research process is an ongoing procedure of correcting hypotheses and later acceptance of scientific facts².

Medical research should have bedside clinical implications, such as the impact of the research with recommendations, steps of action according to the findings, and how the results can affect other people's practices. Identifying areas of strength and weakness by mapping research activity over a long-period could help planners to direct future research activities to achieve the objectives of the national strategic plan in the country.

The aim of this study is to map all the published, unpublished, and ongoing research in the Kingdom of Bahrain over the past 40 years and prioritize future research accordingly.

METHOD

All published, unpublished and ongoing research between 1980 and 2019 were searched. Sources of information: Electronic database searches including Medline, EMBASE, and Scopus (1980-2019); Local medical journal searches: the Bahrain Medical Bulletin (BMB) and the Journal of Bahrain Medical Society (JBMS); Personal contact: a letter was sent to all members of the Department of Psychiatry, Ministry of Health and College of Medicine and Medical Sciences, Arabian Gulf University, outlining the purpose, scope, and national importance of collecting data of all published/unpublished and ongoing research activities. Unpublished and ongoing studies were sought from personal communication with active researchers and records of the secondary healthcare research committee; Contact via telephone and e-mail reminders to researchers who conduct research activities. All data were compiled and tabulated according to their type, or subspecialty, purposes, clinical categories, targeted age group, and design used.

RESULT

The total number of published papers was 653 (92.4%), 37(5.2%) were unpublished reports, and 17 (2.4%) were ongoing projects, see table 1. Figure 1 depicts the psychiatric research output over the past 40 years. Number (80%) of published research were between 2015 and 2019.

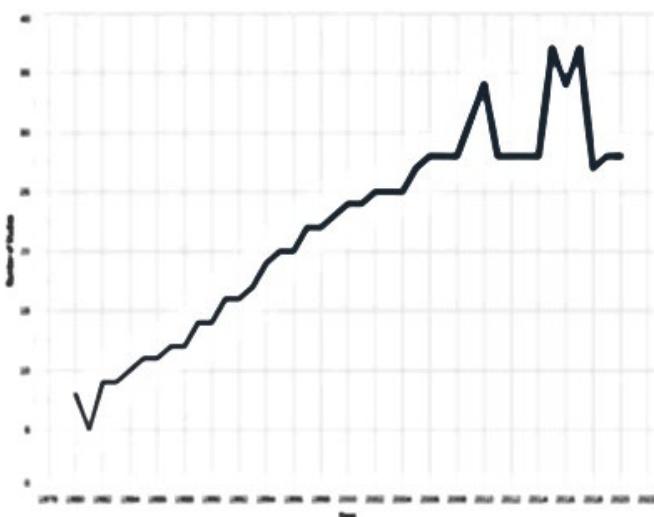
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Table 1: Published and Unpublished Articles Between 1980 and 2019

Item	n	%
Ongoing Projects (2017-2019)	17	2.4%
Published Research (1980-2019)	653	92.4%
Unpublished Reports (1980-2019)	37	5.2%
Total	707	100%

Figure 1: Research Growth over the Past 40 Years

General adult psychiatry constituted 275 (38.9%) followed by geriatric



psychiatry 154 (21.8%), child and adolescent psychiatry 107 (15.1%), drug and alcohol rehabilitation 56 (7.9%), rehabilitation psychiatry 59 (8.3%), and anxiety disorders 2 (0.28%), see table 2.

Table 2: Distribution of Published Literature by Clinical Area

Published Literature (n=653)	n	%
General Adult Psychiatry Unit	275	38.9%
Geriatric Psychiatry Unit	154	21.8%
Child and Adolescent Psychiatry Unit	107	15.1%
Drug and Alcohol Rehabilitation Unit	56	7.9%
Rehabilitation Psychiatry Unit	59	8.3%
Anxiety Unit	2	0.28%
Total	653	92.4%

The majority of studies 472 (66.8%) were about health services followed by epidemiology prevalence in 157 (22.2%) and diagnosis and treatment in 24 (3.4%), see table 3.

Table 3: Distribution of Published Studies by Research Problem

Published Literature (n=653)	n	%
Health Services	472	66.8%
Diagnosis or Treatment	24	3.4%
Epidemiology/ Prevalence Study	157	22.2%
Total	653	92.4%

Studies addressed the following disorders: depression 235 (33.2%), followed by schizophrenia 124 (17.5%), attention deficit hyperkinetic disorder (ADHD) 86 (12.2%), autism spectrum disorder (ASD) 92 (13%), bipolar disorder 84 (11.9%), and dementia 32 (4.5%), see table 4.

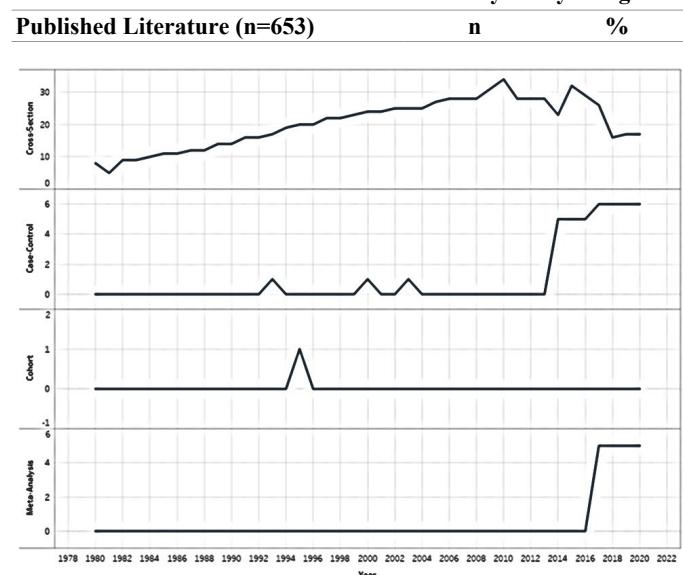
Table 4: Distribution of Published Studies by Clinical Entity

Published Literature (n=653)	n	%
Schizophrenia	124	17.5%
Depression	235	33.2%
Dementia	32	4.5%
Bipolar AD	84	11.9%
ADHD	86	12.2%
ASD	92	13%
Total	653	92.4%

The majority of studies were cross-sectional 585 (82.7%) followed by case-control 42 (5.9%), systematic review and meta-analysis 25 (3.5%), and one (0.1%) cohort design, see figure 2 and table 5.

Figure 2: Distribution of Studies by Design

Table 5: Distribution of Published Literature by Study Design



	n	%
Cross-sectional	585	82.7%
Case-control	42	5.9%
Cohort	1	0.1%
Meta-analysis	25	3.5%
Total	653	92.4%

DISCUSSION

The total number of research in psychiatry is reasonable, taking into consideration the limited number of trained human resources and lack of financial support. This reflects the dedication and persistence of some mental health personnel in pursuing research despite these limitations. The high number of ongoing research supports this explanation. Most of the unpublished reports (37) were studies that were presented in conferences. Almost half of the studies were done by the General Adult Psychiatry Unit (GAPU), Psychiatric Hospital and nearly one-third included affective disorders. GAPU is the largest unit in the psychiatry hospital in terms of the number of specialized staff and the number of psychiatric populations attached to it^{3,4}.

Depression was the most prevalent psychiatric disorder among clinic attendees, followed by schizophrenia and drug and alcohol rehabilitation services, according to the most recent Psychiatric Hospital annual report⁵.

Almost a quarter of published research dealt with the geriatric population (above 65 years). The most likely reasons for the relatively large number of research activities in this population were related to easy accessibility, as many of these patients are either inpatients or attending community daycare centers. Interested ministry of health staff (not necessarily mental health staff) preferred to perform studies on this population as validated instruments are readily available, and the response rate is assured. It is worth noticing that the Child and Adolescent Psychiatric Unit (CAPU) conducted 16% of all researches in mental health in the country despite the limited staff.

The vast majority of published research used a cross-sectional design and focused on description or analyzing clinic data. These data are readily available from patient's files or registry and do not need complicated analysis. These studies lack clinical implications and how to use the basic statistics as an indicator for measuring improvements or changes in trends over time. Follow-up studies that involve a certain type of patients over a long period are scarce. Only a few long-term follow-up studies were completed among children and adolescents with ASD, ADHD, and suicide attempts⁶⁻⁸. Suicide is a public health problem that was extensively investigated in Bahrain as evidenced by 10 publications compared to other public health issues in mental health⁹.

Epidemiological studies that focused on estimating prevalence rates ranked second among topics. The majority, if not all, calculated the prevalence of clinic attendees and generalized it to the general population¹⁰. This area needs further attention to get baseline figures of incidence/prevalence rates for major psychiatric disorders such as major depressive episode, bipolar disorder, substance use, intellectual disability, schizophrenia, Alzheimer's disease, ASD and ADHD. This kind of research needs financial resources, multidisciplinary team participation, and allocated protected time.

Studies on treatment and diagnosis were scarce and did not include clinical trials. The distribution of studies by type of patient reflects their representation in hospital attendance and not due to their actual community presentation according to known published international rates. The pattern of research activities in the Kingdom of Bahrain is probably the use of robust research designs such as case-control and meta-analysis in 12% of the total published data^{11,12}.

Research activity is not considered part of the daily work of both medical and paramedical staff. The bulk of published research was the product of a few people driven by self-motivation and intellectual curiosity. To improve the research situation is to consider that the performance evaluation of staff should have a component of research productivity as a prerequisite. In addition, people in charge of continuing professional education should include research methodology and how to write and publish research as part of the training programs for medical, nursing, and other specialty staff.

CONCLUSION

Mapping of mental health research in Bahrain between 1980 and 2019 revealed a relatively large number of publications and ongoing research. The vast majority of studies were cross-sectional, used available clinical data, and included mostly certain clinical populations such as depression, schizophrenia, bipolar disorder, drug and alcohol problems, ADHD, and autism. Anxiety disorder, mood disorder, and intellectual disability were not adequately studied.

In the future, there is a need for collaborative research between the Gulf Cooperative Council countries in psychiatry because of shared linguistic, ethnic, socio-cultural similarities. Furthermore, efforts should focus more on integrating basic research with clinical psychiatry especially in domains of molecular medicine and personalized medicine.

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