



Prince Sultan Military College of Health Sciences Research Themes

Prince Sultan Military College of Health Sciences (PSMCHS) is dedicated to educating and training health care professionals with competitive abilities and leadership skills. This statement reflects the strong emphasis on the importance of conducting scientific research and providing community services following the best quality standards. Therefore, in accordance with its "Strategic Plan Goal No.4: Achieving excellence in scientific research," PSMCHS values the importance of scientific research that will strive to enhance the health of individuals and the general public.

PSMCHS recognizes research and research-led learning as primary factors in achieving College key performance indicators (KPIs), including completion, approval, and widespread implementation of research policies and procedures, peer-reviewed publications, participation in scientific conferences, and collaborative research following the highest international quality. Therefore, research themes of PSMCHS have been developed to align and reflect College goals, its faculty interests and strengths, as well as curriculum.

Public & Environmental Health - public health aims to protect and improve the health of people and communities through health promotion, disease and injury prevention research, and the identification of preventing and responding to diseases. While environmental health, as a part of public health, focuses on the relationship between people and their environment. It promotes the health and well-being of people by contributing to the development of healthy and safe communities. One of the central issues of public and environmental health research is to advance policies and programs that will reduce NCDs, chemical and other environmental exposures in air, water, soil, and food, protect people and provide communities with healthier environments. This research theme is consistent with the long-term goals of PSMCHS in achieving excellence in scientific research.

The Public & Environmental Health research theme at PSMCHS will consider such areas as Respiratory Critical Care; Health Promotion & Disease Prevention; Environmental Hazards & Global Environmental Health; Epidemiology; Pulmonary Disease, Preventing & Responding to Infectious Diseases.

Medical Education & Health Workforce Development - the mission of medical education is scientific and health education, research, and patient care. This includes recruiting and retaining a highly qualified, well-trained workforce. Therefore, the purpose of this research theme at PSMCHS is to educate students and ensure that future physicians acquire the competencies, skills, and abilities that will enable them to practice professionally and ethically at the highest level. PSMCHS strives for excellence in delivering educational services, ensuring that medical education meets high-quality standards throughout the entire medical education cycle. This research theme has been developed with a fundamental commitment to be the leading regional College with the highest internationally recognized standards in the health sciences.

Medical Education & Health Workforce Development research theme at PSMCHS will consider such areas as Teaching & Learning Healthcare Profession; Clinical Education; Healthcare Curriculum Development; E-Learning & Healthcare; Quality of Medical Education.



Life Sciences - a broad area of research encompassing biology, biotechnology, genomics, proteomics, bioinformatics, pharmaceutical, and biomedical research and methods. This field aims to explain molecular, cellular, and physiological mechanisms. Research and development in the life sciences will strengthen the public health response to natural, accidental or deliberate epidemics/pandemics. This research theme aims to predict and prevent health risks for the Saudi and international community. In line with the PSMCHS Clinical Laboratory Science Program, Life Sciences research will explore and provide an understanding of current scientific methods, techniques in the expeditious diagnosis and treatment of disease. Life sciences research at PSMCHS ranges from the atomic structures of protein complexes to the functions of cells and tissues in whole organisms.

The life sciences research theme at PSMCHS will consider such areas as Hematology and Molecular Cytogenetics; Chemical pathology and metabolic disorders; Clinical Immunology; Histopathology and Oncology; Laboratory management and quality assurance.

Mental Health & Wellbeing - Mental health disorders are a major public health problem worldwide, affecting people of all ages, cultures, and socio-economic status. More than 75% of mental health disorders occur in people under the age of 24, with depression most often seen in students. Mental health disorders cause serious impairments in personal, social, and professional functioning, with significant social costs associated with the productivity and use of health services. The Saudi National Mental Health Survey (SNMHS, 2020) found that about 34% of Saudis meet the criteria for a mental health condition sometime in their life. Therefore, there is a need for an infrastructure that will ensure equal access to mental health services for everyone in the Saudi community. These research themes at PSMCHS will open new opportunities by shedding light on existing problems that will broaden the understanding of mental health issues among Saudis.

Mental Health & Wellbeing research theme at PSMCHS will consider such areas as Children & Adolescents Mental Health; Adults' Mental Health; Populations' Emotional, Psychological, & Social Well-Being; Mental Trauma & Sleep & Psychological Disorders; Post-Traumatic Stress Disorder.

Trauma & Patient Safety - the high burden of trauma-related morbidity and mortality in patients and a lack of knowledge about patient safety make this research theme a subject of continuous quality improvement, research, and intervention. International experience has significantly increased the number of meaningful efforts to improve the quality of care, trauma prevention, and patient safety. This was achieved largely by recognizing that medical errors are a potentially preventable source of morbidity and mortality for patients and that reasonable efforts to improve the quality of care will reduce traumas, which are a major cause of death, disability, and health care costs. In Saudi Arabia, trauma represents a serious public health problem associated with increased mortality and morbidity rates. Given this international experience, trauma and patient safety research among the Saudi population could improve treatment outcomes and reduce healthcare costs, thus significantly increasing treatment value.

Trauma & Patient Safety at PSMCHS will consider such areas as Anesthesia & Patient Safety; Patients' Recovery & Rehabilitation; Musculoskeletal Injuries; Neurological Injuries; Visceral Injuries.



Health Information & Communication Technology - evidence in research shows that lack of communication is one of the most common causes of adverse events for hospitalized patients. Nowadays, health communication and health information technology (IT) plays a central role in health care, public health, and how society views health. These processes constitute the ways and context in which professionals and the public seek, understand and use information about health, which significantly influences their decisions and actions about health. This research theme has been developed to meet the PSMCHS Health Information Management program, designed to prepare graduates to manage and store patient health information and medical records, enable computer information systems, collect and analyze patient data and use classification systems. Health information and communication research technology research will positively affect the health care system both within the local community and during international cooperation, by improving the health outcomes, the quality of health care, and health equity.

Health Information & Communication Technology research theme at PSMCHS will consider such areas as Healthcare Technology; Instrumentation & Health Data Management; Patients' Health Records & Confidentiality; Telemedicine & Telehealth; Mobile Health.

Dental & Oral Health - a key indicator of overall health, well-being, and quality of life. It covers a range of diseases and health conditions, including dental caries, periodontal (gum) disease, tooth loss, oral cancer, oral manifestations of HIV infection, oral-dental injuries, and stomatitis. Oral health contributes to various non-communicable diseases, including cardiovascular disease, diabetes, pneumonia. The Department of Oral and Dental Hygiene Program at PSMCHS provides the best oral and dental hygiene services as an integral part of its educational program. The program emphasizes the importance of education through participation in many campaigns and exhibitions to raise awareness among citizens and highlight the importance of the prevention of oral and dental diseases. Thus, in-depth research of oral and dental health among the Saudi population, with the participation of policy-makers and professionals, can significantly reduce the burden of oral health-related diseases.

Dental & oral health research theme at PSMCHS will consider such areas as Oral-systemic Interactions; Oral Diseases; Oral Health-Related Quality of Life; Oral/Dental Trauma; Dental Health Services.

At PSMCHS, a great deal of effort is devoted to studying and explaining scientific and health concerns faced by the population. These research themes were developed to improve the general understanding of health disciplines at the public health level. These research themes aim to consolidate knowledge and experience by prioritizing each academic program of the College and create a unique opportunity to accelerate progress, develop a new and better way to have a valuable contribution to the global scientific community and the general public.

The research process includes the contribution of both faculty and students who make significant and ongoing contributions to PSMCHS research activities throughout the academic years and after graduation. This commitment to research will strengthen PSMCHS research production and status as an entity promoting and supporting productive and ingenious researchers contributing to science and healthcare development locally, regionally, and globally.