UWI
ST. AUGUSTINE CAMPUS
TRINIDAD & TOBAGO, WEST INDIES

CARIBBEAN CENTRE FOR

HEALTH SYSTEMS RESEARCH AND DEVELOPMENT

2018 Online Survey of

Technical Assistance and Training Needs of

Academic Staff of the Faculty of Medical Sciences

BACKGROUND

The need for a structured approached to research capacity building at the Faculty of Medical Sciences (FMS) The UWI, St Augustine, as well as the willingness of staff to attend research skills training workshops, were among the key findings of an online survey of all academic staff conducted in April 2017. The present survey was designed to determine research productivity as well as perceptions related to research in the FMS and to identify training and other areas for support.

One of the four Strategic Objectives of the Caribbean Centre for Health Systems Research and Development includes the strengthening of research capacity and productivity at FMS. The Centre has outlined the following key activities, identified in a survey conducted in 2017 and endorsed by the Dean of the FMS, t geared towards increasing the research outputs of the Faculty:

- The provision of technical assistance to Faculty members,
- Research skills training workshops,
- Mentoring/collaboration among Faculty members

A short line survey was disseminated to collect input from sFMS Academic taff to facilitate buy-in and optimize participation.

OBJECTIVES

The survey objectives were to:

1. Identify, prioritize and support ongoing or static research projects that require technical support (design, data analysis, etc.) to accelerate completion and publication,
2. Identify the best dates/times combination to schedule training activities,
3. Identify staff with research skills competencies such as data analysis, who are available and willing to mentor/collaborate with other faculty members.

METHODOLOGY

Design and participants

During the period November 12 to November 30, 2018, an online survey of all full-time academic staff members of the FMS was conducted using SurveyMonkey® Several reminders were sent to staff who were identified by SurveyMonkey® as non-responders.

Instrument

The short 13-item questionnaire was designed to collect data on ongoing or static research projects that needed technical assistance; to identify the type of research skills training workshops that should be prioritized in 2019 (as well as suitable dates and times); and to collect baseline data for the establishment of a mentorship programme at the FMS. The survey was pretested after it was designed in SurveyMonkey®.

Procedure

The email addresses of all full-time academic staff members of the FMS were obtained from the FMS IT Department. Subsequently, emails were sent to the staff members with a link to the questionnaire. Weekly reminders were sent via email to non-responders to encourage participation during the study period.

The Campus Office of Planning and Institutional Research (COPIR), specifically Ms Keren Wilson, facilitated the use of SurveyMonkey® for data collection.

Data Analysis

An SPSS file that contained the data collected was downloaded from SurveyMonkey® for analysis. Categorical variables were described as frequencies and relative percentages.

RESULTS

Response Rate

The survey response rate was 35.5% (61 of 172 full-time academic staff completed the survey). Approximately one-third of the of the respondents (21, 34.4%) were from the School of Medicine and 26.2% (16) were from the School of Veterinary Medicine. Both Schools of Dentistry and Nursing accounted for 11.5% (7) of the respondents; while 6.6% (4) of the respondents were from the School of Pharmacy. Other respondents (6, 9.8%) included the staff from the Dean's office, the Library and the Centre for Medical Sciences Education.

Technical Support for On-going Research

Most survey participants (45, 73.8%) indicated that they would like to receive technical assistance to support ongoing research projects. Participants were asked to identify and rank their top 3 projects for which technical assistance was needed. Forty-nine projects were identified (see appendix 1). Table 1 below presents the breakdown of the types of technical assistance needed for the projects identified.

Table 1: Technical assistance needed to support ongoing projects

Projects	Research Design	Data Analysis	Manuscript Preparation
Rank 1 (n=22)	9 (40.9%)	16 (72.7%)	8 (36.4%)
Rank 2 (n=17)	7 (41.2%)	12 (70.6%)	7 (41.2%)
Rank 3 (n=10)	4 (40.0%)	8 (80.0%)	5 (50.0%)

For each category of projects identified, data analysis was the most frequent technical assistance identified as vital to support ongoing projects (>70%). This was followed by research design (≥40.0%) and manuscript preparation (>36.0%).

Other areas of technical assistance identified are:

- Specimen collection and public awareness

- Research Proposal Development
- Access of better equipment (e.g. from Faculty of Engineering, Department of Chemistry) for data acquisition
- Implementation including funding and recruitment of research assistants
- Laboratory support

<u>Training</u>

Approximately half of the survey respondents (30, 49.2%) indicated that they were interested in attending research skills training workshops. Data analysis was the most frequent workshop identified (n=23, 76.7%). Greater than half of the participants were interested in attending research grant writing workshops (n=18, 60%) and scientific manuscript preparation workshops (n=17, 56.7%). Other areas identified for training are listed below:

- Technical training to use the laser or contact profilometer in Engineering, the Atomic Force microscope in Chemistry
- Sample Design

Participants indicated that Thursday was the preferred day to host training sessions (n=17, 56.7%) and 9:00am to 1:00pm was the preferred time period (n=16, 53.3%).

<u>Mentorship</u>

Table 2: Self-Assessment of Research Skills Competency Level (n-61)

Competency Level	Research Design	Data Analysis	Manuscript Preparation	Grant Writing	Peer review
Basic: Fundamental Awareness		2 (3.3%)	2 (3.3%)	5 (8.2%)	3 (4.9%)
Novice: Limited Experience	4 (6.6%)	11 (18.0%)	3 (4.9%)	10 (16.4%)	6(9.8%)
Intermediate: Practical Application	16 (26.2%)	12 (19.7%)	15 (24.6%)	14 (23.0%)	11 (18.0%)
Advanced: Applied Theory	10 (16.4%)	6 (9.8%)	10 (16.4%)	2 (3.3%)	8 (13.1%)
Expert: Recognized Authority	4 (6.6%)	3 (4.9%)	5 (8.2%)	3 (4.9%)	7 (11.5%)
No Response	27 (44.3%)	27 (44.3%)	26 (42.6%)	27 (44.3%)	26 (42.6%)

For each of the five research skills assessed, less than 12% of the participants rated their competency level as expert or advanced. The largest percentage of respondents rated themselves as intermediate across the research skills (19.7% - 26.2%). Greater than 20% of the respondents indicated that their competency level for data analysis and grant writing was either basic or novice.

Twenty-six (42.6%) of the respondents indicated that they are interested in participating in a mentorship programme with an equal distribution of self-identified mentors and mentees. Almost half of the respondents (n=29, 47.5%) would like to participate in a research discussion forum.

NEXT STEPS

- Brief interview or discussion with the researchers (aligned to the 22 projects identified as priority 1) to gather more information on the projects and assistance needed.
- Short group sessions with the researchers (aligned to the 22 projects identified as priority 1) to address issues related to research design, data analysis and manuscript preparation
- Hosting of a SPSS Data Analysis Workshop
- Hosting of a Research Grant Writing Workshop
- Establishment of an online Research Discussion Forum
- Matching mentors to mentees based on competency level and research interest (see appendix 2).

APPENDIX 1: RESEARCH PROJECTS THAT NEED TECHNICAL SUPPORT

Projects Ranked a 1st Priority
1. Developing a Diabetic Tear Test
2. Staphylococcus sharing between pets and their owners
3. Chagas disease
4. Medical Education
5. Substance abuse and prescription drug abuse among medical students
6. Preparation of manuscript – topic not identified in the survey
7. National oral health survey
8. The current status of ticks and tick-borne diseases in Trinidad and Tobago and three other Caribbean countries
9. The effect of dietary oral challenges and abrasion on the various bioactive restorative materials
10. Skill in applying various analytic techniques and interpretation
11. Survey of Knowledge, Attitudes & Practices of HPs with respect to adverse drug reaction reporting
12. Diabetes patients & Self-care management
13. Design and development of a new animal model for screening antidepressants
14. PhD thesis – topic not identified in the survey
15. Opinion on research curricular component
16. Quality Management in Health Care
17. Opportunistic glaucoma and diabetic retinopathy screening using smartphone-based monoscopic digital imaging technology and iCare applanation tonometry in a low resource setting
18. Caprine Blood transfusion project
19. PhD - topic not identified in the survey
20. Prostate cancer myths
21. Monitoring of antibody-mediated immune responses to Newcastle disease virus in non-commercial chickens across Trinidad and Tobago
22. Endocrine disruptors in meconium

Projects Ranked as 2nd Priority
1. Using the ERG in Retinal Dysfunction
2. Residues in Trinidad and Tobago
3. Wildlife health survey
4. PCOS
5. Factors affecting cervical smear uptake in primary care
6. Preparation of manuscript - topic not identified in the survey
7. The prevalence of gastrointestinal helminths and Giardia in dogs from Bahamas and Tobago
8. The pH and titratable acidity on local still and flavoured sparling waters and the effect of dental hard tissue
9. Skill in grant writing and management - topic not identified in the survey
10. Pilot of ADR reporting systems in public health
11. Psychopharmacological investigations on some medicinal herbs in Trinidad and Tobago

12. Prospective study on GnRh with fibroids
13. Patient education methods
14. Patient-Reported Outcomes (PRO's) and Patient-Reported Outcome Measures (PROMs)
15. Quality of life in glaucoma patients
16. Kidney stones KAP
17. Antimicrobials from venom delivered by nanoparticles

Projects Ranked as 3rd Priority
1. Using Visual Analysis to Detect Pituitary Adenomas
2. Diabetes – full topic not identified in the survey
3. Prevalence of undiagnosed and gestational diabetes in primary care
4. Preparation of manuscript - topic not identified in the survey
5. A systematic review of the effect of prophylaxis pastes on the surface roughness of dental composite materials
6. Ability to utilize various software tools to support research and analysis tasks
7. Hypertension study
8. Efficacy of bleaching techniques
9. Cocreation of Health Services
10. BPH KAP

APPENDIX 2: RESEARCH INTERESTS IDENTIFIED BY POTENTIAL MENTORS AND MENTEES

Mentors	Mentees
1. Vision Research and new test development. 2. One Health 3. Veterinary Virology 4. Vector-borne viruses and diseases 5. Population genetics 6. Asthma 7. Diabetes 8. Screening 9. Renal impairment 10. Any aspect of medicine 11. Epidemiology and Public Health, 12. Health promotion 13. Health services 14. Paediatric Palliative Care 15. Medical education, modernization in health education 16. Fibroids 17. Medical Disorders of Pregnancy 18. Respiratory Medicine Research 19. Alcohol Mental Health 20. NCDs 21. Women's health 22. Mental Health 23. Behavioural and Psychopharmacological studies 24. Studies on medication safety	1. Wildlife health 2. One health 3. Chagas disease 4. Yellow fever, 5. Leptospirosis 6. Ticks and tick-borne diseases 7. The surface characteristics of dental biomaterials and dental hard tissue as a result of manipulation after instrumentation and or dietary challenges 8. Epidemiology 9. Food safety 10. Surveillance of antimicrobial resistance and zoonoses 11. Drug utilization and quality indicators 12. Educational needs of health professionals w.r.t medication use 13. Non-various cervical lesions 14. Dental education 15. Dental Materials 16. The Health Systems 17. Elderly Mortality 18. Health Information 19. Brachytherapy 20. Bladder cancer 21. Immune responses and vaccine design pertaining to veterinary species. 22. Preharvest Food safety, 23. Antibiotic resistance, 24. Epidemiology and ecology of foodborne pathogens