The WHO estimates that in 2030 there will be 1.485.365 in the African region. Mozambique has no prehospital care system nor trauma centers despite having a high incidence of injuries. The few critical patients that arrive in the ER rely on self-arranged transport to reach emergency care and have a low chance of survival because of few resources and lack of training of the staff. Basic trauma resuscitation techniques are unknown to most hospital personnel in LMICs. The aim of this study is to evaluate the attitude and knowledge of the management of trauma care among clinical staff of three quaternary level Hospitals of Mozambique.

It will be conducted a prospective cross-sectional study between April and May 2020, in Maputo, Beira and Nampula Central Hospitals. The participants will include the medical doctors and technicians (general practitioners, general surgeons, orthopedic surgeons and anesthetists) that work on an ER. Data will be collected using a three-part questionnaire including: demographic information, trauma knowledge questionnaire and trauma attitude questionnaire. All the data will be analysed using SPSS version 22.0. Standard descriptive and summary statistics will be generated for the demographic part of the survey. Independent t-test and one-way ANOVA will be used to compare the level of knowledge and attitude with each other and with the demographic variables.

Over the past decade, there has been increasing interest in analyzing how risk factors defined at multiple levels affect individuals' health outcomes. Multilevel Model (MLM) has been presented as an appropriate statistical tool that may help with this need because it enables the simultaneous examination of individual-level and environmental-level effects on health outcomes. Despite the recently increasing application of MLM in public health research, the use of this technique in sports and recreational (SR) injuries studies has been very limited.

The risks of SR injuries have continued to increase as participation in SR activities have increased across age groups in the United States (U.S.). According to the U.S Centers for Disease Control and Prevention, the average annual estimate of SR injury episodes in the U.S. is 8.6 million with about 4 million treated in hospital emergency departments. While this number is significant, SR injuries have been largely under-researched and there is still less awareness on how individual-level (e.g. body composition and physical activity) and environmental-level factors (e.g. built environment) simultaneously and interactively affect SR injury outcomes.

This study i) reviewed literatures that have examined the effect of environmental-level risk factors on SR injuries, ii) determined the modeling techniques applied in the studies, and iii) discussed, with examples, the potential for using MLM to understand how environmental-level factors might alter the association between individual-level risk factors and SR injuries. The outcome from this study will help in developing SR injuries interventions at multiple levels of influence.