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.

4A – Sport, March 24, 2021

4A.001 APPLICATION OF MULTILEVEL MODELING IN SPORTS AND RECREATIONAL INJURIES STUDIES

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10.1136/injuryprev-2021-safety.97

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.

4A.002 THE IMPACT OF INJURY ON INSUFFICIENTLY ACTIVE WOMEN'S PARTICIPATION IN SPORT/PHYSICAL ACTIVITY

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10.1136/injuryprev-2021-safety.98

Background Injury is a barrier to sport/physical activity (PA) participation, but the impact of this barrier for insufficiently active (not meeting minimum PA guidelines) women is unknown.

Method Insufficiently active women, who identified injury as a barrier to engagement in sport/PA, participated in an online concept mapping exercise.

Results Brainstorming (n=45) elicited 208 impacts of injury. After synthesis and editing, participants (n=25) sorted 94 impact statements into groups (mean no. of groups, 9.3; mode 6; range 4–15). Multidimensional scaling and hierarchical cluster analysis identified a nine-cluster solution listed from highest to lowest mean importance rating out of 5: Fear and frustration (17 statements; importance 3.92); Physical implications of injury (15; 3.71); Activity restrictions (8; 3.66); Financial implications (4; 3.63); Worries (6; 3.46); Adjustment and management (14; 3.39); Mental and emotional wellbeing (14; 3.2); Impact on daily life (6; 3.03); and Social impact and engagement (10; 2.82).

Conclusion The impact of injury extends beyond physical engagement in sport/PA. To increase PA in insufficiently active women who experience injury as a barrier, public/health professionals, governing sport bodies, insurance providers, and program deliverers need to be educated to understand the breadth of this barrier.

Learning Outcomes The impact of injury is multi-dimensional. Women who experience injury need access to evidence-based advice, affordable rehabilitation options, support (psychological/physical/logistical), and information about suitable sport/PA options. The program deliverer has an opportunity to provide information that will potentially reduce the impact of this barrier, see these women return to sport/PA earlier, and increase their levels of PA.

4A.003 POST-CAREER TRANSITION EXPERIENCES OF PROFESSIONAL AMERICAN FOOTBALL PLAYERS RETIRING FROM BRAIN-HEALTH CONCERNS

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10.1136/injuryprev-2021-safety.99

Background The long-term effects of concussions have led to concerns regarding former professional American football players' post-career transitions. This cross-sectional study examines post-career transition experiences of former players retiring due to brain-health concerns.