

Breast Protective Equipment Usage and Perception Among Female Contact Sports Players

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BACKGROUND

- Breast pain and injuries caused by excessive breast motion have been frequently reported by female athletes especially in combat and ball sports.
- Awareness of breast safety amongst remains low (Brisbine et al., 2019).
- This study aimed to investigate the usage of breast protective equipment by female athletes, the causes of breast injuries, and their perceptions on breast protective equipment.



METHODS

- Survey was delivered to 21 female athletes (aged ≥18), participated in contact or combat sports at any competitive level for over 1 year (Table 1).

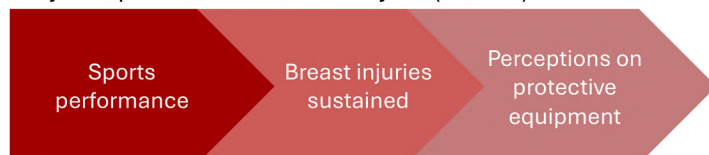


Table 1. Types of sports involved in the study

Sports Type	Number
Combat Sports (Martial Arts, Boxing)	7
Volleyball	10
Handball	3
Rugby	1

DISCUSSION

- Conventional breast inserts have caused significant discomfort from heat and perspiration and limit the free movement of the wearers.
- It is necessary to develop specific protective bras that offer effective control of breast motion, adequate breast impact resistance against motions and acute contact forces during high intensity exercises.
- This study is limited by small sample size.



REFERENCE

Brisbine, B. R., Steele, J. R Phillips, E. J., & McGhee, D. E. (2019). The occurrence, causes and perceived performance effects of breast injuries in elite female athletes. *Journal of Sports Science & Medicine*, 18(3), 569–576.

RESULTS

- 71% of the participants (n=15) reported incidents of breast pain or injuries, while 80% (n=12) agreed that their sports performance was negatively affected.

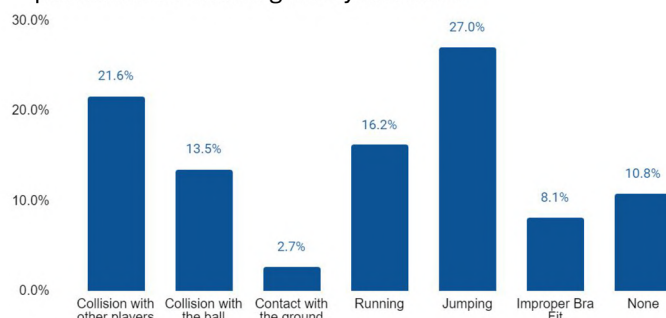


Figure 1. Causes of breast pain or injuries

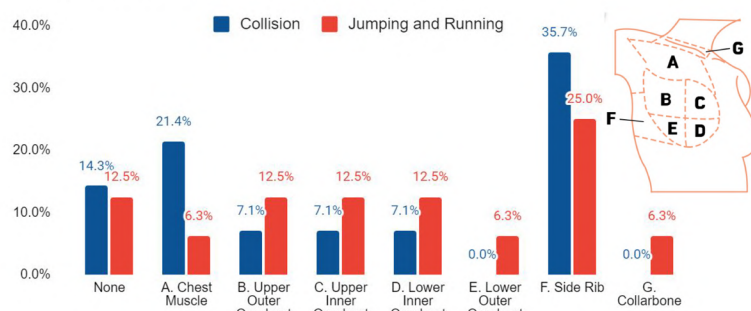
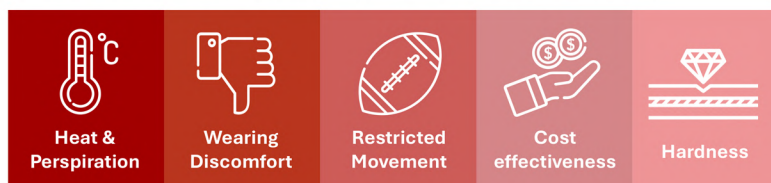


Figure 2. Pain areas due to physical activities

- Only 33.3% (n=5) of the respondents associated the pain with the protection performance of their sports bras, while 13.3% (n=2) were unsure.
- Over 80% (n=12) had never use chest protective equipment because of heat and perspiration (n=6, 40%), wear discomfort (n=6, 40%), limited body movements (n=5, 33.3%), cost-effectiveness (n=5, 33.3%), and hardness (n=3, 20%).



IMPACT STATEMENT

- The study highlight the limitations and design directions in developing more advanced chest protective equipment.

ACKNOWLEDGEMENT

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