



Aalborg Universitet

AALBORG UNIVERSITY
DENMARK

Routine Use and Satisfaction of Measures for the Prevention of Ankle Sprain Injuries in Indoor Sports

Østergaard, Steffen Bunjko; Nielsen, Theodor Ken; Petersen, Kasper; Grønlykke, Thor Buch; Kersting, Uwe Gustav; Clausen, Mikkel Bek; Bandholm, Thomas Quaade; Thorborg, Kristian; Lysdal, Filip Gertz

Publication date:
2019

Document Version
Publisher's PDF, also known as Version of record

[Link to publication from Aalborg University](#)

Citation for published version (APA):

Østergaard, S. B., Nielsen, T. K., Petersen, K., Grønlykke, T. B., Kersting, U. G., Clausen, M. B., Bandholm, T. Q., Thorborg, K., & Lysdal, F. G. (2019). *Routine Use and Satisfaction of Measures for the Prevention of Ankle Sprain Injuries in Indoor Sports*. Poster presented at 15th Scandinavian Congress on Medicine and Science in Sports, Copenhagen, Denmark.

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal -

Take down policy

If you believe that this document breaches copyright please contact us at vbn@aub.aau.dk providing details, and we will remove access to the work immediately and investigate your claim.

Routine Use and Satisfaction of Measures for the Prevention of Ankle Sprain Injuries in Indoor Sports

Steffen Bunjko Østergaard¹, Theodor Ken Nielsen¹, Kasper Petersen¹, Thor Buch Grønlykke², Uwe Kersting^{1,3}, Mikkel Bek Clausen^{4,6}, Thomas Bandholm⁵, Kristian Thorborg^{4,5} & Filip Gertz Lysdal^{1,2}

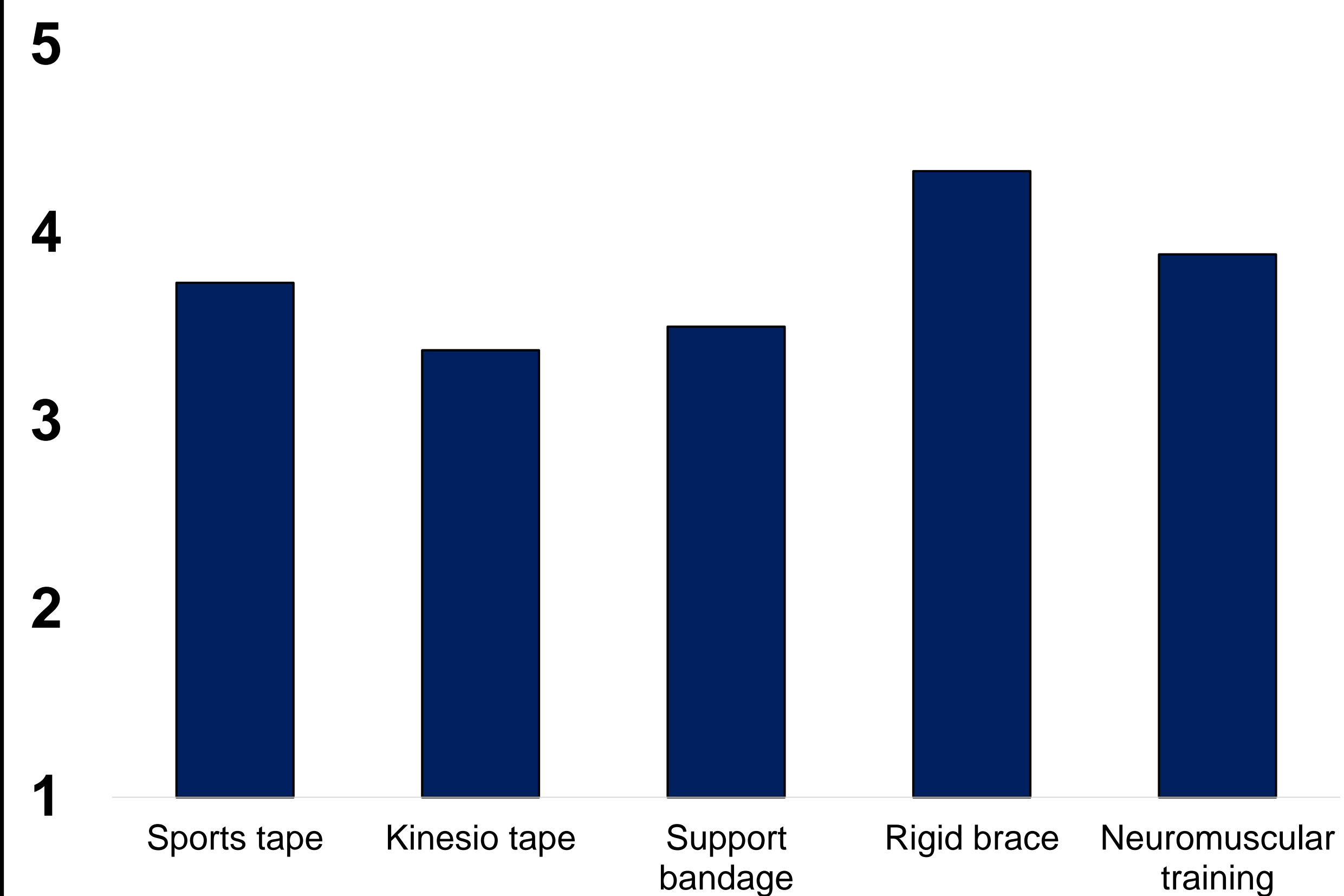
¹HST, Aalborg University (Denmark), ²Spraino ApS (Denmark), ³German Sport University Cologne (Germany), ⁴SORC-C, Amager-Hvidovre Hospital (Denmark), ⁵PMR-C, Amager-Hvidovre Hospital (Denmark), ⁶University College Copenhagen (Denmark)



INTRODUCTION

- Ankle sprain injuries account for up to 30% of all sport-related injuries^[1]
- 80-90% are of a lateral nature caused by a sudden excessive inversion of the foot^[2]
- Ankle sprains are extremely common in indoor sports^[1,3]
- Athletes with a previous ankle sprain are 4.9^[3] to 8.2^[4] times more likely to sustain another ankle sprain injury
- Current best practice prescribes a combined use of an external measure and neuromuscular training for 1-2 years^[5]

SATISFACTION

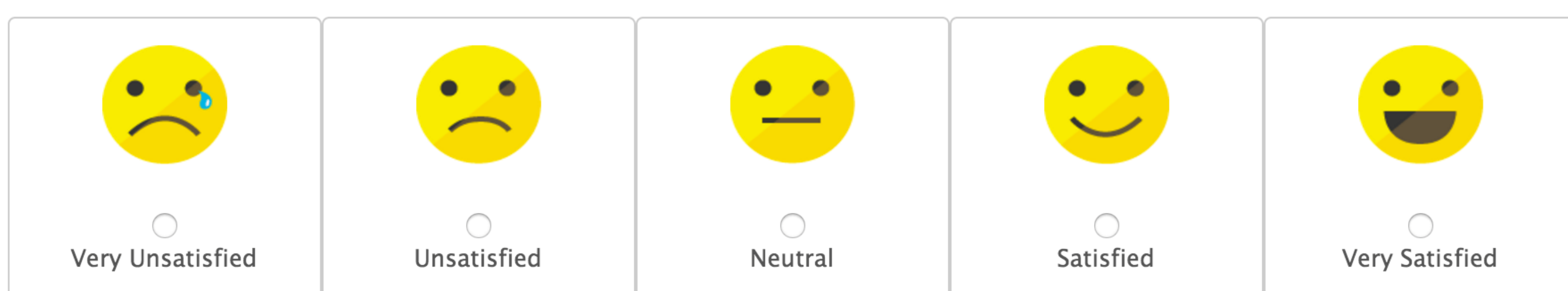


OBJECTIVES

To identify the use of, and satisfaction with, measures for preventing ankle sprain injuries in indoor sports

METHODS

- 398 Players with a recent ankle sprain
 - Handball, Basketball and Badminton
 - Elite/sub-elite level (league, 1st, 2nd, and 3rd division)
- Questionnaire regarding use of and satisfaction with preventive measures
 - Sports tape
 - Kinesio tape
 - Rigid brace
 - Support bandage
 - Neuromuscular training
- Level of satisfaction rated using a Likert scale
 - Differences analyzed using a Mixed-design analysis of variance



RESULTS

- **90.7%** of all players have used at least one preventive measure since their most recent ankle sprain
 - 77.6% have used sports tape
 - 14.3% have combined neuromuscular training with rigid bracing and/or sports tape
 - Rigid bracing was superior in adherence (56.1% continued use)
- Players were significantly more satisfied with:
 - Rigid bracing vs. any other preventive measure ($P < 0.001$)
 - Neuromuscular training vs. Kinesio tape ($P < 0.001$)
 - Neuromuscular training vs. support bandage ($P < 0.001$)
 - Sports tape vs. Kinesio tape ($P = 0.003$)
- **72.8%** with a very recent ankle sprain (≤ 3 months) had stopped using preventive measures
 - "I did not feel the need anymore"



CONCLUSIONS

- **Almost all players (90.7%) have used a measure to prevent ankle sprains**
- **Players were most satisfied with rigid braces**
- **Players do not follow current best practice**



REFERENCES & ACKNOWLEDGEMENTS

- ^[1] Fong DT, Hong Y, Chan L, et al. A Systematic Review on Ankle Injury and Ankle Sprain in Sports. *Sports Med* 2007;37:73-94
- ^[2] Khor YP, Tan KJ. The Anatomic Pattern of Injuries in Acute Inversion Ankle Sprains. *Orthopaedic Journal of Sports Medicine* 2013;1
- ^[3] McKay GD, Goldie PA, Payne WR, et al. Ankle injuries in basketball: injury rate and risk factors. *Br. J. Sports Med.* 2001;35:103-108
- ^[4] Pourkazemi, Fereshteh, et al. Predictors of recurrent sprains after an index lateral ankle sprain: a longitudinal study. *Physiotherapy*, 2018, 104.4: 430-437.
- ^[5] Verhagen, E. A. L. M, Bay K. Optimising ankle sprain prevention: a critical review and practical appraisal of the literature. *Br. J. Sports Med.* 2010;44:1082-1088

