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Christopher Zody
Wilmington College

Erika Smith-Goodwin
Wilmington College

Jennifer Walker
Wilmington College

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Student-Athletes' Understanding and Preferences of Recovery Interventions Based on Education

Christopher Zody; Erika Smith-Goodwin PhD, AT, ATC; Jennifer Walker MA, AT, ATC
Wilmington College; Sport Sciences Department

OBJECTIVE

The purpose of this study was to investigate if student-athlete education on recovery interventions affected their understanding and choice of these interventions.

DESIGN AND SETTING

This study was an experimental pre-test-post-test randomized group study. It was conducted on student-athletes at one division III college in Ohio. The independent variable in this study was the group of student-athletes who received education regarding the recovery modalities. The dependent variables of this study were the preferences and knowledge each athlete displayed towards the treatment options. All participants were given the initial survey, then split evenly into a recovery intervention education group and a no-education control group. The education group was given an information sheet regarding the recovery modalities. All participants were then given the second survey a week after the first survey.

PARTICIPANTS

This study used a convenience sample. A total of N=60 surveys were distributed with a 100% return rate. Within the study population, 74% (n=42) of responding participants reported as female and 26% (n=15) reported as male.

INTERVENTION

In questions 1-5 the survey asked student athletes about their previous use of cold tubs (cold water immersion, CWI), contrast water therapy (CWT), stretching (STR), active movement recovery (AMR), and fluid/food replacement (FFR). Questions 6 and 7 asked about previous recovery modality education experience. It also asked, in questions 8-12, how well they understand each recovery

modality. Questions 13-15 asked which recovery modality they typically used and which option they would use in the future. Finally, question 16 determined the gender of the participant. This survey was given to student athletes twice. The first time, the survey was given to all 60 student-athletes with no intervention. After the initial survey, half the athletes were given an education sheet with information about each modality, handed to them by athletic training students. One week later, the student-athletes were all asked to fill out an identical survey to the initial one. A panel of experts determined face validity for the survey. The Table of Specifications (ToS) established content validity. The Institutional Review Board (IRB) at the college approved the study through expedited review. Quantitative descriptive statistics (frequency counts and percentages) were calculated for every applicable item of the survey. The Pearson's Chi Square test was used with education and gender as grouping variables to determine statistical significance. The alpha level was set at $p=.05$ a priori. The data was analyzed using the Statistical Package for the Social Sciences (SPSS), version 24.0.

MAIN OUTCOME MEASUREMENT

The survey included 16 questions. Questions 1-6 used a 2-point Likert Scale (Yes², No¹) to collect ordinal data. Questions 7-12 used a 4-point Likert Scale (Strongly Agree⁴, Agree³, Disagree², Strongly Disagree¹) to collect ordinal data. Questions 13-15 used a 5-point Likert Scale (Cold Tub⁵, Contrast Bath⁴, Stretching³, Active Recovery², Fluid/Food Replacement¹) to collect nominal data. Question 16 used a 3-point Likert Scale (Male³, Female², Prefer Not To Specify¹) to collect nominal data.

RESULTS

Athletes reported using stretching the most (n=57, 95%), followed by active recovery (n=46, 77%), fluid/food (n=46, 76%), cold water bath (n=25, 42%), and contrast bath (n=18, 30%). Athletes had a positive outlook on the education on recovery modalities. Of the athletes who had received education on modalities, 97.5% (n=37) of them found the education to be effective. In addition, athletes reported an increase in understanding the various modalities, with contrast bath showing the greatest improving in understanding (63%, n=36/54 to 83%, n=40/48). One statistically significant result from the study was the difference in male and female use of recovery modalities ($X^2=17.227$, $df=4$, $p=0.002$) for this question. Male student-athletes (n=15) reported that 13% (n=2) preferred stretching, whereas 74% (n=31) of females preferred stretching. There was no statistically significant difference in the preference of recovery modalities between

the education and no-education groups. There was no statistically significant difference in the understanding of recovery modalities between the education and no-education groups.

CONCLUSION

Results suggested that education did not affect the student-athletes understanding or preference of the various recovery interventions. The lack of statistical significance in this data does not nullify the need for education regarding recovery modalities. Responses from the student-athletes to the education they received indicated that the education had some positive effect. Several athletes increased their understanding of modalities throughout the study, and several of the athletes even changed their modality preference. Further research should be conducted to better understand the effects of education in this scenario.

KEY WORDS: *Patient Education, Recovery, Recovery Interventions, Student-Athletes*