


2015

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Callen, Megan C., "Re-injury Anxiety & Return-to-Sport Outcomes in College Students" (2015). *Scholarly & Creative Works Conference 2019*. 8.

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REINJURY ANXIETY & RETURN-TO-SPORT OUTCOMES IN COLLEGE STUDENTS

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Introduction

When athletes are injured, they are faced with the initial injury stage, physical therapy, rehabilitation, and then the return-to-sport. When athletes have a negative outlook, they are less likely to recover from the injury at the proposed date of return-to-sport, take a longer span of time to recover, and have higher levels of stress and anxiety. Wadey, Podlog, Hall, Jamson-Tley, Ticks-Tittle, & Hammer, (2014) examined the dimensions of reinjury anxiety and found athletes with greater reinjury anxiety were in denial of the severity of their injury by wishing things would get better and had a greater focus on their distress. Significant indirect effects for coping were found for wishful thinking, venting of emotions, denial, and behavioral disengagement (Wadey et al., 2014). The purpose of the present study is to examine reinjury anxiety and return-to-sport outcomes within college students. Participants (n=34) solicited from Dominican University will be sent an email containing the Reinjury Anxiety Inventory (Walker, Thatcher & Cavallee, 2010), the Return to Sport After Serious Injury Questionnaire (Podlog & Eklund, 2005) and demographic items including type of injury and sport. These questionnaires measure the level of reinjury anxiety and if the perspective of the injury is positive or negative.

Method

Participants

There were 34 student athletes (22 females & 15 males) recruited from Dominican University of California athletics: 15 soccer, 10 basketball, 1 hockey, 1 cross-country, 2 lacrosse, & 5 volleyball.

Materials

- Survey on surveymonkey.com
- Demographic questions: age, sport, injury, how long doctor/trainer said athlete would be sidelined from sport, how long athlete was actually sidelined from sport
- Reinjury Anxiety Inventory (RIAI): 28-items; scale scored from 0 ('Not at all') to 3 ('Very much so') (Wadey et al., 2014)
- Return to Sport After Serious Injury Questionnaire (RSSIQ): 15-items scale scored from 1 ('Highly Disagree') to 7 ('Highly Agree') (Podlog & Eklund, 2005)

Procedure

- Participants were sent an email containing the survey.
- Survey started with instructions on how to conduct the survey.
- Survey took 15-20 minutes to complete.
- Survey finished with a Thank You Page for the participant volunteering for the study.
- RIAI Scoring

Scores for the items that pertained to reinjury anxiety regarding rehabilitation showed a minimum score of 0 would indicate there was not reinjury anxiety present and a maximum score of 29 would indicate there was extreme reinjury anxiety in rehabilitation. Scores for the items that pertained to reinjury anxiety regarding returning to sport/competition showed a minimum score of 0 would indicate there was not reinjury anxiety present and a maximum score of 15 would indicate there was extreme reinjury anxiety in re-entry into training/competition for the designated sport.

RSSIQ Scoring

uses a 7-point Likert scale. The RSSIQ was made to assess injured athletes' perceived psychological outcomes of returning to sport (Podlog & Eklund, 2005). It assesses the cognitive, affective and behavioral aspects of the participants' post-injury return outcomes.

Hypotheses

- Those with greater reinjury anxiety will be kept out of their sport longer than those who experience less reinjury anxiety and negative thoughts
- It will take the participants with greater anxiety longer to recover
- With a negative attitude, personal perspective of actual length of injury will be skewed.

Figure 1. Reinjury Anxiety Scores for Rehabilitation and Return-to-Sport

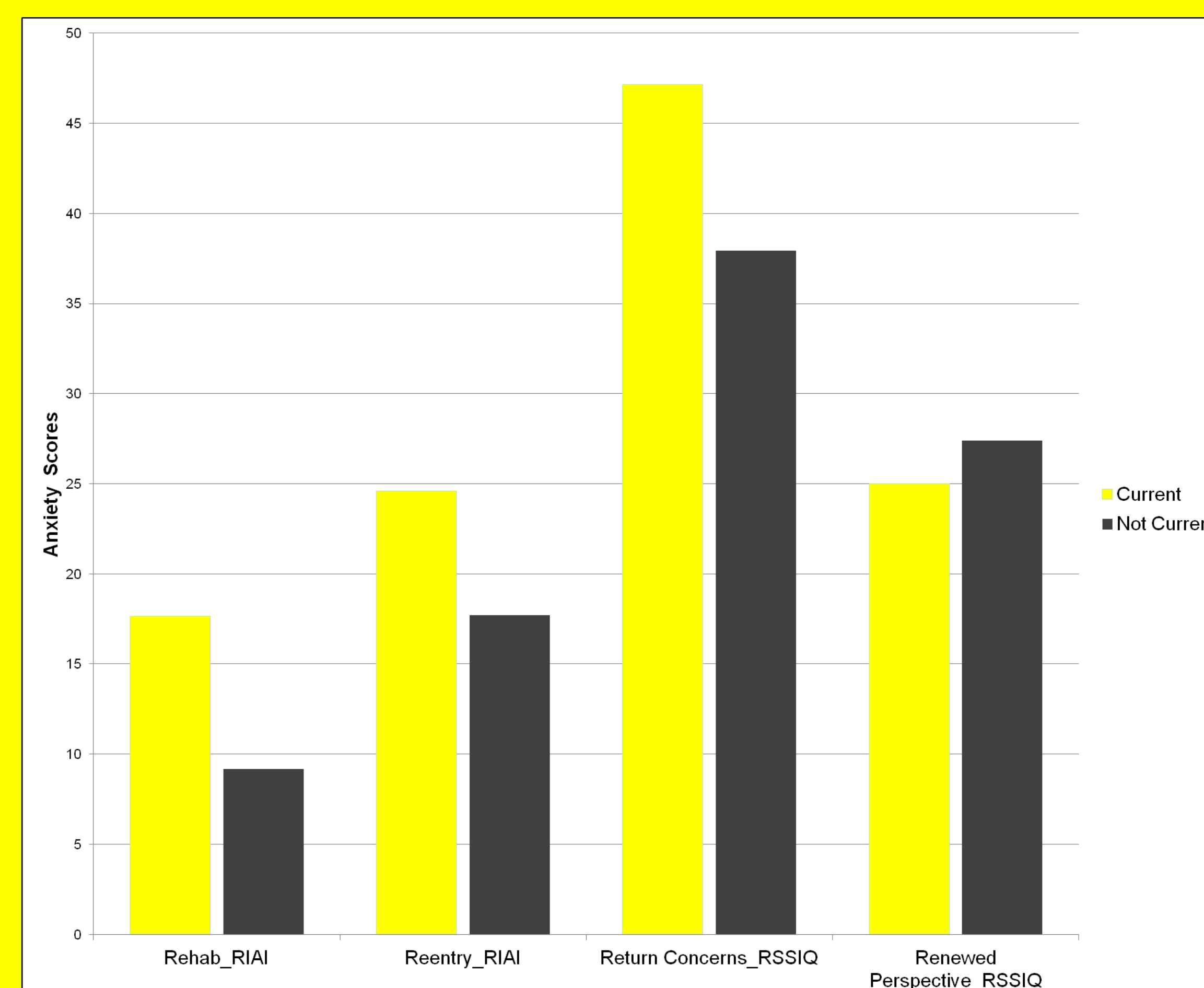


Table 1. Injury Length Prescribed by Athletic Trainer/Doctor

		Injury_Length _Code
Rehab_RIAI	Pearson	.017
	Correlation	
	Sig. (2-tailed)	.925
	N	34
Reentry_RIAI	Pearson	.124
	Correlation	
	Sig. (2-tailed)	.484
	N	34
ReturnConcerns_RSSIQ	Pearson	-.057
	Correlation	
	Sig. (2-tailed)	.749
	N	34
RenewedPerspective_RSSIQ	Pearson	.338*
	Correlation	
	Sig. (2-tailed)	.041
	N	37

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

Table 2. Actual Injury Length

		Actual_Length _Code
Rehab_RIAI	Pearson	-.181
	Correlation	
	Sig. (2-tailed)	.306
	N	34
Reentry_RIAI	Pearson	.109
	Correlation	
	Sig. (2-tailed)	.539
	N	34
ReturnConcerns_RSSIQ	Pearson	.000
	Correlation	
	Sig. (2-tailed)	.998
	N	34
RenewedPerspective_RSSIQ	Pearson	.187
	Correlation	
	Sig. (2-tailed)	.267
	N	37

** Correlation is significant at the 0.01 level (2-tailed).

Results

Figure 1. Anxiety Subscales for Current and Concurrent Injuries

- The Reinjury Anxiety Inventory between rehabilitation groups was statistically significant, $t(2) = -2.29, p = .05$. Those with current injuries had more anxiety about rehabilitation than those who did not have a current injury.
- The Reinjury Anxiety Inventory between reentry groups was statistically significant, $t(2) = -2.00, p = .05$. Those with current injuries had more anxiety about reentry into their sport than those who did not have a current injury.
- The Return to Sport After Serious Injury Questionnaire for Return Concerns was not statistically significant, $t(2) = -1.25, p = .05$.
- The Return to Sport After Serious Injury Questionnaire for Renewed Perspective was not statistically significant, $t(5) = 0.88, p = .05$.

Table 1. Injury Length Predicted by Athletic Trainer/Doctor

- There was a significant positive linear relationship between the doctor's predicted injury length and the Renewed Perspective for the Return-to-Sport scale, $r(5) = 0.41, p = .05$. Those with longer injury lengths prescribed by the doctor and/or athletic trainer had more of a renewed perspective.

Table 2. Actual Injury Length

- Actual injury length was not statistically correlated with any of the reinjury anxiety and return-to-sport subscales.

Conclusions

- Those with greater reinjury anxiety were athletes with current injuries but it did not correlate to how long they were kept out of their sport due to anxiety.
- Most athletes experienced the most anxiety within rehabilitation of their injury than in the return to their individual sport.
- We can help athletes by reducing reinjury anxiety in the rehabilitation stage by using coping strategies and visualization techniques. There is a need to focus on psychological health as well as physical health.

Future Directions

- Future research will use more athletes to recruit to participate.
- Future research could also look at reinjury anxiety measures between contact and noncontact sports.

References

- Podlog, J., & Eklund, R. C. (2005). Return to sport after serious injury: A retrospective examination of motivation and psychological outcomes. *Journal of Sport Rehabilitation*, 11, 20-24. Retrieved from <http://journals.humankinetics.com>
- Wadey, R., Podlog, J., Hall, M., Jamson-Tley, J., Ticks-Tittle, C., & Hammer, C. (2014). Reinjury anxiety, coping, and return-to-sport outcomes: A multiple mediation analysis. *Rehabilitation Psychology*, 59(1), 25-32. doi:10.1037/a0030022