

The Effects of Mental Imagery on Recovery Time & Adherence to Sport-Injury Rehabilitation Programs in the Competitive Athlete

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How this Research Adds to the Field

- “Rehabilitate the mind” (1993)
 - Needs evidence to support
- Strategy the therapist can implement
 - CD script
- Answering the call for improved methodology
 - Control group gets the treatment
 - Assess placebo effect/experimenter bias
 - Intervention study
 - Larger sample size

Why Mental Imagery: Application to Sport-injury Rehab

- Following injury:
 - increase in stress = increase in muscle tension → limits healing
 - Imagery can relax the body → increased blood flow
 - Greater blood flow = faster healing (Benson, 1975; Bresler, 1984a, 1984b)
 - Imagery enhances the immune system
 - Simonton et al. (1978), Hall (1983)

Response Variables

- Adherence
 - Ratio of attended visits/total scheduled visits
 - ATC provides from chart
- Recovery time
 - Ratio of actual days/predicted days to recovery
 - ATC's give estimate (primed by medical statistic)

Three Treatment Conditions

- Group 1
 - Goal Setting Intervention
 - Healing Imagery CD Script
- Group 2
 - Goal Setting Intervention
 - Healing Memory CD script
- Group 3
 - Goal Setting Intervention
 - Relaxation CD script

Hypothesis I

- The mean adherence score for the healing imagery condition will be greater than the mean adherence score of the healing memory or relaxation conditions, controlling for the subject's motivation to recover.

Hypothesis II

- The mean recovery time for the healing imagery condition will be less than (faster) the mean recovery time of the healing memory or relaxation conditions, controlling for the subject's motivation to recover.

Hypothesis III

- Adherence and recovery time will be negatively correlated.

Research Design

3 Factorial nested design (n = 96)

Injury Location	Injury Severity	Imagery (5 min) Relax (5 min)	Memory (5 min) Relax (5 min)	Relax (10 min)
Knee	2	N = 8	N = 8	N = 8
	3	N = 8	N = 8	N = 8
Ankle	2	N = 8	N = 8	N = 8
	3	N = 8	N = 8	N = 8

Sampling Frame

- Convenient Sample (N= 96)
 - Midwestern Universities & sports medicine clinics
 - Various men's & women's sports
- Consecutive Recruitment
 - Inclusion criteria:
 - Sport-related injury
 - 2nd or 3rd degree injury (> 10 therapy visits)
 - 18+ years old
 - Must be in 1st week of rehab to begin study

Questionnaires & Checks

- Mental Imagery Questionnaire-Revised (MIQ-R) Hall & Martin, 1997
 - Time as second measure
- Athlete Demographic Survey
- Goal Setting Survey
- Athlete Discharge Survey
- ATC Discharge Survey

Procedure

- Contact from treating therapist
- Meeting with Athlete (35-45 minutes)
 - Informed Consent
 - Demographic Survey
 - MIQ-R
 - Goal Setting Intervention
 - Goal Setting Survey
 - CD script & Log Form Instruction

Procedure (continued)

- Goal Setting Survey #2
 - During week 3 for 2nd degree
 - During week 6 for 3rd degree
- Discharge from Rehabilitation
 - Collect Intervention Log Form
 - Athlete Discharge Survey
 - Athletic Trainer Discharge Survey

Data Analysis

- MANCOVA
 - Blocking Variables
 1. Injury Location (Knee, Ankle)
 2. Injury Severity (2nd or 3rd degree)
 - Response variables
 1. Adherence
 2. Recovery Time
 - Independent Variable
 - CD script (3 levels)
 - Covariate
 - Motivation to Recover

THANK YOU!!