In this study, we evaluated the association between pre-operative pain catastrophizing (PC) and post-operative pain and itch among individuals undergoing skin autograft for major thermal burn injury. We hypothesized that increased pain would be associated with increased pain and itch in the immediate post-operative period.

**Skin Autograft**
• Skin autograft procedure involves excising tissue from the site of the burn, harvesting donor skin from a non-burned area (donor site, Figure 1) meshing harvested skin (Figures 2 and 3), and grafting the meshed harvested skin onto the site of burn injury (Figure 4).1
• Among individuals who require a skin autograft, acute and chronic post-operative pain and itch are common sequelae at the graft and donor sites.

Catastrophizing
• PC is a term used to define cognitive and emotional responses to pain which are characterized by three factors: magnification of pain, rumination on pain, and feelings of helplessness in response to pain.3
• Increased PC has been shown to predict post-operative pain after abdominal surgery4, lumbar fusion surgery5, and laparoscopic tubal ligation6. To date, the ability of PC to predict post-operative pain after tissue autograft, and the ability of PC to predict itch outcomes, has not been assessed.

**MATERIALS AND METHODS**
• Two hundred forty-three patients (American (EA) and African American (AA)) ages 18 to 59 years of age who were admitted to the North Carolina Jaycee Burn Center within 72 hours of thermal burn injury and for whom a skin autograft was planned were approached for informed consent.
• Information regarding burn total body surface area (TBSA), age, and ethnicity (EA vs. AA) was obtained from the medical record. Enrolled patients completed an initial interview assessment prior to skin autograft including demographic information and PC (Pain Catastrophizing Scale3 (PCS)). High pain catastrophizing was defined by a cut-off of >24.7
• Characteristics between high/low catastrophizers were compared via ANOVA and Student’s t test.

**INTRODUCTION**

In this study, we evaluated the association between pre-operative pain catastrophizing (PC) and post-operative pain and itch among individuals undergoing skin autograft for major thermal burn injury. We hypothesized that increased pain would be associated with increased pain and itch in the immediate post-operative period.

**BACKGROUND**

Skin Autograft
• A skin autograft procedure involves excising tissue from the site of the burn, harvesting donor skin from a non-burned area (donor site, Figure 1) meshing harvested skin (Figures 2 and 3), and grafting the meshed harvested skin onto the site of burn injury (Figure 4).1
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RESULTS
• 128 individuals met eligibility criteria, 88 were approached, and 62 were enrolled in the final cohort.
• PC was significantly higher in those who reported significantly worse graft-site pain, donor-site pain, and donor site itch (Figure 5).
• These differences persisted even after controlling for age, sex, race (Model 1 in Table) and TBSA (Model 2 in Table).
• The individual PCS questions most highly correlated with both graft and donor site was “There’s nothing I can do to reduce the intensity of the pain” and “I keep thinking about how badly I want the pain to stop.”

**REFERENCES**