POSTTRAUMATIC STRESS AND ATTRIBUTIONS IN COLLEGE STUDENTS AFTER A TORNADO

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INTRODUCTION

Most adults will be exposed to a natural disaster at some point during their lifetime

While many will respond well and have no lasting negative effects, a minority will not

Possible negative effects include posttraumatic stress symptoms such as reexperiencing the disaster, persistent avoidance of stimuli related to the disaster, and increased physiological arousal

Little research has examined predictors of posttraumatic distress in adults exposed to natural disasters

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INTRODUCTION

Recent research examining children exposed to tornadoes has focused on the role of attributions and exposure in predicting distress, with good predictive ability found
    e.g., Lack & Sullivan, 2008

Attributions are defined as the reasons or explanations for an occurrence, and have not been well-researched in disaster situations

Exposure can refer to both objective and subjective exposure
    Objective – How much damage did the disaster inflict?
    Subjective – How scared were you during the tornado?

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INTRODUCTION

No research, however, has examined disaster-specific attributions in adults and their contribution to long-term distress

The present study aimed to examine, in a college population, the relationship between posttraumatic stress symptoms, attributions, and level of exposure to a disaster

- H_1: There will be a relationship between distress and level of exposure to the tornado
- H_2: There will be a relationship between distress and attributions
- H_3: A combination of exposure level and attributions made will be predictive of the level of distress associated with tornadoes

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METHOD

Participants

212 (69% females) undergraduates enrolled at ATU

Mostly Caucasian (85%), Asian (6%), and African-American (4%)

13% Freshman, 26% Sophomores, 34% Juniors, 27% Seniors

Mostly single (81%)

Mostly 18-23 (83%)

54% reported exposure in last 5 years to a tornado

METHOD

Procedure

After approval from the ATU Human Subjects Committee, professors were sent an email containing a web address to give to students if they wanted to take the survey

Professors offered small amount of extra credit as an inducement

Students logged on to http://tornadoexperiences.questionpro.com to take the survey

After obtaining informed consent, participants completed a series of questionnaires

METHOD

Measures

Demographic Questionnaire – measured age, race, year in school, marital status, as well as determining exposure to a tornado

Tornado Exposure Questionnaire – completed only by those who were exposed to a tornado, assess information pertaining to perceived; asses information pertaining to perceived life threat, life-threatening experiences, and loss-disruption experiences

Reaction Index – 20-item measure of posttraumatic stress symptoms for use in adult populations; assesses the presence and degree of symptoms such as bad dreams, repetitive thoughts, emotional isolation, and somatic symptoms

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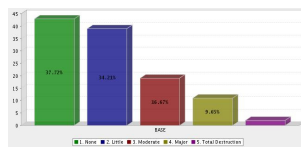

METHOD

Measures

Traumatic Attribution Checklist – originally designed for use in children, this version was adapted for use in adults; a 28-item self-report measure that asks questions concerning internal versus external causes for the trauma, the importance of attributing responsibility, expectations, hypervigilance, meaning coming from the trauma or trauma-related events, omen formation, and one open-ended question concerning the cause of the trauma
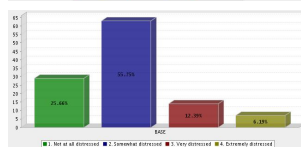
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RESULTS

Tornado Exposure Questionnaire

Damage at location:

Amount of distress during the tornado:

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RESULTS

Reaction Index

Exposed group – 30.24 (SD = 9.84, range 20-76)
Non-exposed group – 31.85 (SD = 9.99, range 20-65)

Both groups had means in the Moderate range of symptom severity according to RI criteria

No significant difference between the two groups
   t = -1.18, p = .241

RESULTS

Trauma Attribution Checklist

Exposed group – 8.69 (SD = 5.32, range 1-43)
Non-exposed group – 8.86 (SD = 5.87, range 1-28)

Neither group endorsed very high levels of overall attributions, but among subscales endorsed "expectations" attributions than any others

No significant difference between the two groups
   t = -0.21, p = .834

RESULTS

Relationship between distress and predictor variables

Correlational analyses revealed statistically significant relationships between total RI score and
   TAC total score (r = .548, p < .001)
   Sex (r = -.241, p < .001)
   Self-report of distress during tornado (r = .205, p < .029)
   Self-report of distress since tornado (r = .348, p < .001)

RESULTS

Prediction of post-disaster distress

Stepwise multiple regression analyses were used to examine the predictive relationship between sex, exposure variables, distress, and attributions

TAC total score entered on the first step and accounted for 37.6% of the variance in total RI score

The remaining variables were not found to add sufficient predictive value to the model, and were thus excluded

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DISCUSSION

Hypotheses 1 and 2 were fully supported
   Statistically significant relationships between posttraumatic stress symptoms and the variables of attributions and exposure

Hypothesis 3 was partially supported
   Attributions alone were a significant predictor of distress in college students exposed to a tornado

The finding of no difference in distress level between exposed and non-exposed students was unexpected, but with precedent
   Lack, Sullivan, and Babitzke (in press) found similar results with school-age children in Oklahoma

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