INTRODUCTION

- Evaluations currently based on individual beliefs (Tobacyk, 2004; Williams, Francis, & Lewis 2009).
- Objective scale needed to classify claims.
- We propose use of a physics-based spectrum for use in future studies on paranormal claims.
  - Smith's (2009) "Continuum Mysteriosum" (ranging from lower- to higher-level paranormal claims) was evaluated for use as an objective measure of paranormal claims.

BACKGROUND

- Few alternative metrics to Tobacyk's (2004) "Revised Paranormal Belief Scale" which evaluates belief only. Offers little insight into reasoning underlying beliefs.
- Rice (2003) identified different patterns for beliefs:
  - Belief in religion and paranormal
  - Belief in only one claim
  - Belief in neither claim
- Williams, Francis & Lewis (2009) found:
  - Positive correlation between religiosity and religious-based paranormal beliefs
  - No relationship between religiosity and paranormal beliefs.
- No consistent results have been found (Emmons & Sobel, 1982; Gorenstein, 2002; Rice, 2003; Williams, Francis, & Lewis, 2009; Shah, Wu, & Chang, 2010).
- Focus has been on correlations between religiosity and belief in the paranormal.
- Lack of research into multi-variable approach.
- Goal: examine psychometric properties of the "Continuum Mysteriosum" using a factor analytic approach.
- Hypothesis: participants will classify paranormal claims according to their deviation from physics.

METHOD

- 874 Participants
  - 566 female, 308 male
  - Mean age = 21.75 years
- 46 paranormal claims (spanning eight categories conceptualized in Smith’s “Continuum Mysteriosum”) were rated on a 8-point Likert scale ranging between:
  - Natural = could be proven with current science.
  - Supernatural = cannot be proven with current science.
- Survey
  - Emotional inclusion/exclusion questions
  - Demographic questions
  - Religiosity scale (Abdel-Khaelek, 2006)

RESULTS

<table>
<thead>
<tr>
<th>Component</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<tbody>
<tr>
<td>Stepping on a crack</td>
<td>0.76</td>
<td>0.79</td>
<td>Modern Acupuncture</td>
<td>0.73</td>
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<tr>
<td>Rabbit’s Foot</td>
<td>0.78</td>
<td>0.74</td>
<td>Modern Tai Chi</td>
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<td>Tooth Fairy</td>
<td>0.67</td>
<td>0.72</td>
<td>Traditional Tai Chi</td>
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<td>Hair</td>
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<td>0.62</td>
<td>Meditation/Yoga</td>
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<tr>
<td>Santa Claus</td>
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<td>0.59</td>
<td>Traditional Acupuncture</td>
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<tr>
<td>Number 13</td>
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<td>Early Chiropractic</td>
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<td>Oxygen</td>
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<td>Chi</td>
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<td>0.41</td>
<td>Witches</td>
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<td>Yin-Yang</td>
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<td>Psychokinesis</td>
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<td>Bible Code</td>
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<td>0.30</td>
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</tr>
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</table>

Notes: Factor loadings ≥ 0.40 are in boldface.

* Loadings ≥ 10
  - Individual mean scores for each of the 46 claims were calculated to determine the claim’s relative position on the natural/supernatural scale.
  - Factor analysis was performed on the data to determine which claims would load onto similar factors, and if these patterns were consistent with Smith’s scale. Using a cutoff value of 0.3, the data loaded onto four distinct factors which accounted for 45% of the variance (see table).
  - Results were inconsistent with Smith’s “Continuum Mysteriosum”.

DISCUSSION

- Factor analysis yielded four distinct factors (see Results table).
  - Factor 1 = Magical Thinking
  - Factor 2 = External Influential Agent
  - Factor 3 = Complementary Alternative Medicine
  - Factor 4 = Unproven yet Plausible Claims
- Future research efforts are needed to:
  - Examine relationship between available paranormal scales
  - Test and validate current scales based on paranormal claims
  - Develop objective measure via psychometric principles and standardized definitions (as developed by the Society of Psychical Research) (Thalbourne, 2009).
- Present findings support that many paranormal claims derive from magical thinking.
  - However, results = inconsistent
- Future research needed to analyze factors further to include other variables/claims.

SELECTED REFERENCES