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Magical and Illusory Thinking in Protestant College Students

Lynley G. Turkelson
Cedarville University, lynleyturkelson@cedarville.edu

Milton E. Becknell
Cedarville University, becknell@cedarville.edu

Chi-en Hwang
Cedarville University, hwangc@cedarville.edu

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Magical Thinking and Scrupulosity in Protestant Christians

Lynley Turkelson, Dr. Milton Becknell, & Dr. Chi-en Hwang

Assistants: Kara Nonnemacher & KC Pugh

Cedarville University



Abstract

Scrupulosity (SC) is a subtype of OCD that manifests in religious obsessions and compulsions. Scrupulosity is associated with poorer prognosis and higher levels of magical thinking. A new measure called the Illusory Beliefs Inventory was created to measure magical thinking in scrupulous populations. However, the items on the spirituality subscale may fail to discriminate between pathological cognition and normal religious beliefs. The purpose of the current study was to clarify the relationship between scrupulosity and magical thinking in Protestant Christians. We sought to determine if higher scores on magical thinking measures simply reflect normally elevated levels for religious individuals. I hypothesized that the Spirituality subscale (F2) scores would not significantly correlate with increased scrupulosity severity. I also hypothesized that spirituality subscale scores (F2) would not significantly correlate with scores on the magical beliefs (F1) and internal state/thought-action fusion (F3) subscales of the IBI. The final sample size included 517 undergraduate students with a mean age of 20. Our first hypothesis was confirmed, as there was no significant difference between spirituality scores and level of SC. However, our second hypothesis was not confirmed because there was a marginally significant correlation between the F1 and F2 subscales of the IBI.





Introduction: What is Scrupulosity?



- **Scrupulosity (SC)** is a subtype of OCD with obsessions and compulsions focused on religious or moral themes¹
- **Obsession:** A reoccurring, intrusive thought that causes anxiety for the person experiencing it

+ Scrupulous individuals experience **intrusive thoughts** related to breaking religious or moral codes

- **Compulsion:** an action that individuals use to temporarily reduce the anxiety caused by obsessions

+ Compulsions typically manifest as religious observance that **far exceeds** normal religious requirement

- Those with SC constantly fear they are doing wrong in the eyes of God and feel the need to justify actions with a type of **perfectionism** that includes compulsive spiritual rituals²



Common Obsessions:

- Fear they may have committed a sin
- Fear they may have caused another's misfortune
- Fear they did not mean their prayers
- Fear that God is upset with them

Common Compulsions:

- Listing and confessing any potential sins
- Constantly apologizing for minor incidences
- Praying excessively until they feel they "mean it"
- Mentally repeating scripture to counteract a "bad thought"

Scrupulous Jews worry about:

- keeping kosher
- ceremonial cleanliness

Scrupulous Muslims worry about:

- Facing exactly toward Mecca when praying

+ Failure to carry out compulsions results in debilitating guilt, anxiety, and typically fear of divine retribution³



Scrupulous Individuals Display Increased Magical Thinking



Magical Thinking:

The belief that certain thoughts or behaviors can causally affect the world in ways that are not considered possible by one's culture.³

- A new measure called the Illusory Beliefs Inventory (IBI) was created to measure magical thinking in scrupulous populations
- One subscale of the IBI uses religious beliefs to test for magical thinking
- We believed the items on the IBI spirituality subscale failed to discriminate between pathological thinking and normal religious beliefs
 - **Pathological religious belief:** “If I take communion before being *certain* I’ve confessed *all* my sin, God will punish me.”
 - **Legitimate religious belief:** “I yelled at my Mom before we left for church, but I know that was unkind. I should apologize before I take communion.”



We predicted...

Hypothesis #1

- The Spirituality subscale (F2) scores would not significantly correlate with increased scrupulosity severity

Hypothesis #2

- Spirituality subscale scores (F2) would not significantly correlate with scores on the magical beliefs (F1) and internal state/thought-action-fusion (F3) subscales





Method



Participants

- 517 Protestant undergraduate students
- Mean age: 20 years

Sampling Method

- A campus-wide email invited students to participate in the study
- Some participants were recruited through Bible classes

Procedure

- Participants responded to the email invitation by completing our survey online
- Participants recruited through Bible classes were given the survey in a classroom setting



Method



- Instrument: our survey was composed of two major measures
- **The Penn Inventory of Scrupulosity (PIOS)**
 - This measure examines the frequency and interference of moral doubts, as well as fear regarding the consequences of sinning
 - This measure was used to determine participants' level of SC
- **The Illusory Beliefs Inventory (IBI)**
 - This scale measures magical thinking using three subscales:
 1. Magical beliefs (F1) – Ex. *“I do something special to prevent bad luck”*
 2. Spirituality (F2) – Ex. *“I believe in a higher power or in God”*
 3. Internal States & Thought-action Fusion (F3) – Ex. *“If I think too much about something bad it will happen”*



+ Results

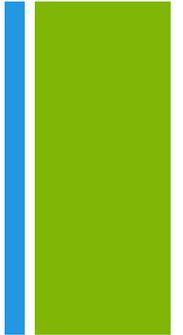
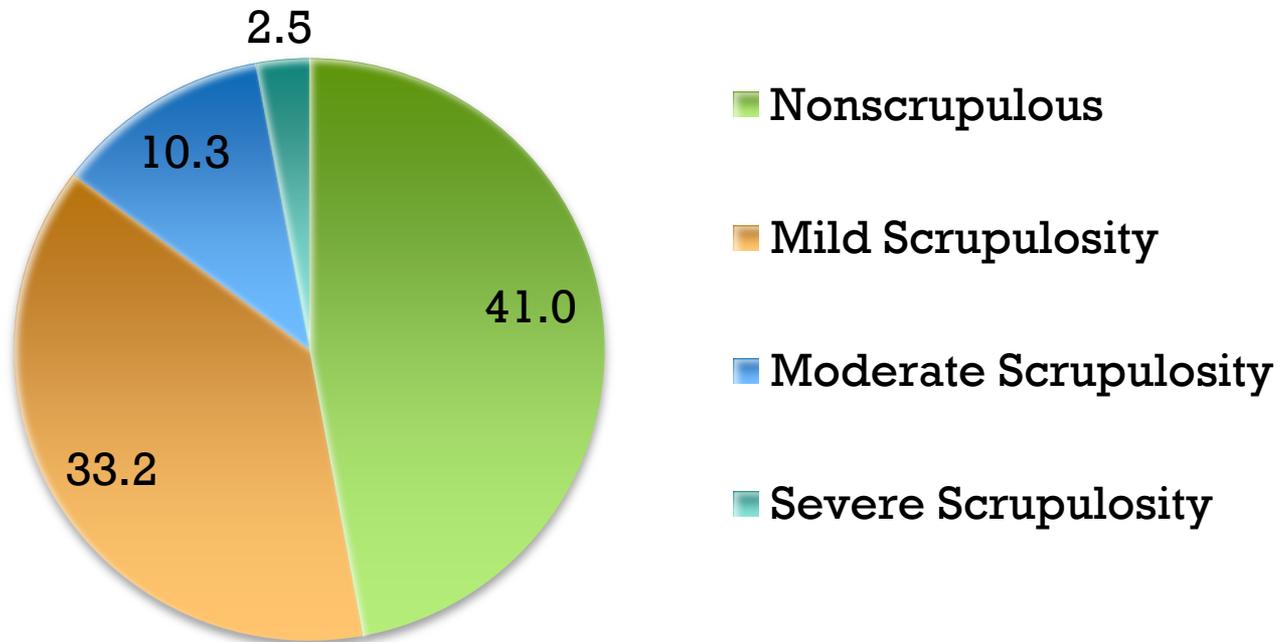


Chart 1 – Percentage of Participants within each Level of Scrupulosity





+ Results



- A one-way ANOVA was performed to explore the impact of scrupulosity on F2 scores. As we hypothesized, there was no statistically significant difference at the $p < .05$ level between F2 scores and different levels of SC: $F(3, 475) = .981, p = .402$.
- Surprisingly, there was no significant difference found between F1 scores and levels of SC: $F(3, 475) = 2.452, p = .063$. This result is further discussed in our conclusions.
- This ANOVA also revealed a significant difference at $p < .001$ between F3 scores and level of SC: $F(3, 475) = 7.502, p = .000$. This is consistent with other findings that thought-action fusion is a primary symptom of SC.⁵

+ Results

Table 1

Pearson Correlations between Subscales of the Illusory Beliefs Inventory (IBI)

IBI Subscales	M	SD	IBI Subscales		
			F1	F2	F3
F1	1.19	1.28	1	.096*†	.322**
F2	7.19	1.21	.096*†	1	.096*†
F3	1.76	1.07	.322**	.096*†	1

Note: F1=Magical Beliefs; F2 = Spirituality; F3 = Internal State and Thought-Action Fusion.

*p < .05 **p < .01

†p denotes the value is of marginal significance. Only correlations over .03 are typically considered meaningful.

A Pearson product-moment correlation revealed a weak, positive correlation between spirituality and magical beliefs. However these values were so small that they can only be considered marginally significant.



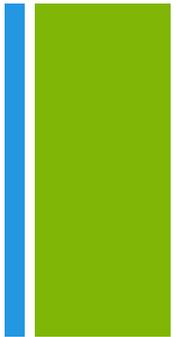
Conclusion



Our first hypothesis was supported. The second hypothesis was not supported because there was a correlation between IBI subscales. However, this correlation was only of marginal significance.

■ Limitations

- Since our sample was limited to student participants from one college, our results may not adequately represent the results for most Protestant Christians.
- Items from the magical beliefs subscale (F1) contained language about magic that made these questions confusing for Christians to answer. For example, on the item “*It is possible to cast a magic spell*” some answered *false*, while others—considering demonic activity—answered *true*. Thus, scores on this subscale may not represent actual levels of magical beliefs held by participants.





Conclusion



■ Future Research

- Future research should focus on modifying the IBI's spirituality subscale to test for pathological, rather than normative spiritual beliefs.
- Efforts should also be made to neutralize language about mystical "magic" to allow the IBI to more effectively detect magical beliefs in religious populations.
- Future research should seek to develop an adequate measure for magical thinking in OCD. The IBI is not an effective measure for those with primarily religious obsessions and compulsions.



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