

Examining the Determinants of Mind- Body Practices for Youth:

The Role of Parental Influence Through Observational Learning

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Successful Living

- What trait, according to research, is the most important for young people to have in order to live a healthy and successful life?
 - A. Family Background
 - B. SES
 - C. Grit
 - D. Resilience
 - E. Self-control

According to Research.....

- While we could make an argument for each trait, research has demonstrated that self-control is critical for success in life.
- *"Self-control is probably the single most important trait to have for success in life. There have been hundreds and hundreds of studies showing that kids with strong self-control do better in school, have better relationships, are less likely to develop emotional problems, their less likely to get into trouble. People with poor self-control show the opposite pattern."*
 - Laurence Steinberg, PhD 'Age of Opportunity'
<https://www.youtube.com/watch?v=QMkig2ojPmc>

Mind-Body Practices and Self-Regulation

- Sub components of self-regulation include cognitive control (attention) and emotion regulation (Posner & Rothbart, 2000)
- Mind-body practices (MBP) include relaxation techniques, guided imagery, meditation, tai chi, qi gong, and yoga (NCCIH, 2015)
- Studies of meditation within adolescent populations have demonstrated its ability to improve attention and increase emotion regulation (Metz et al, 2013; Zoogman et al, 2014)
- Neuroscientific studies have shown the ability of meditation to promote positive development of the brain's self-regulatory center (Anterior Cingulate Cortex) (Tang et al, 2010)

Knowledge Gap

Studies of meditation and adolescents have shown that the more a young person practices meditation the greater benefit to well-being he or she will experience (Zenner et al, 2014)

BUT

No studies to date have examined the determinants of mind-body practices for youth

Objective

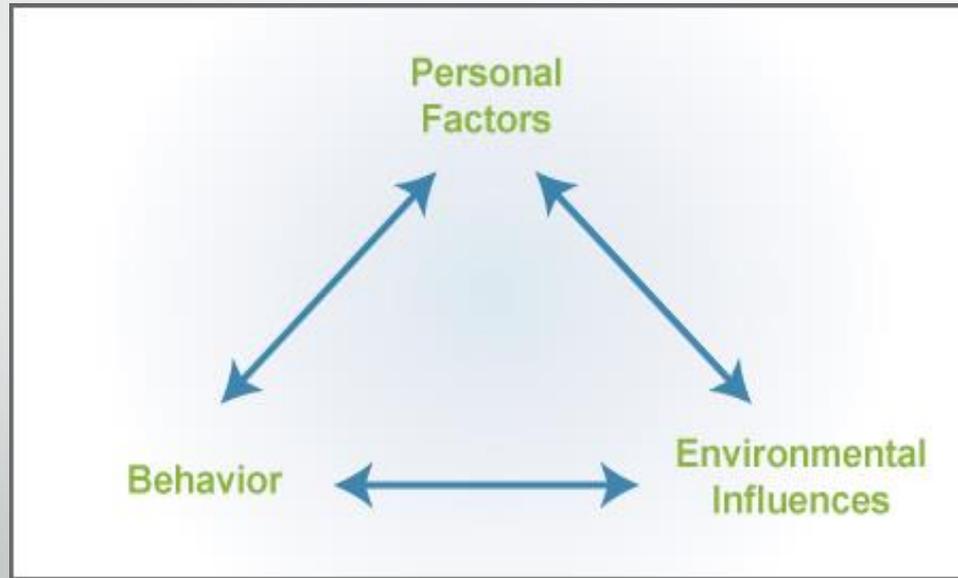
The objective of this study is to evaluate the association between parent use of MBP and child use of MBP using data from the National Health Interview Survey 2012

Research Hypothesis

Children (4-17 years old) are more likely to use MBP's for health purposes through observational learning when their parent(s) models use MBP's for health purposes.

Method

Sex, Age, Learning disability, ADHD
Stress, Anxiety, Depression, Difficulty with Emotions,
Concentration, Behavior and Getting Along (DECBGA)



Parent Use of MBP

Region
Family Poverty
Food Security
Family Education

Child Use of MBP

Method

- 2012 National Health Interview Survey conducted by U.S. Census Bureau for the Centers for Disease Control and Prevention's National Center for Health Statistics
- Children ages 4-17 whose parents completed the adult portion of the Alternative Medicine survey
- The Institutional Review Board at Indiana University approved the protocol for this secondary data analysis (Protocol # 1510326929)

Method

The alternative medicine portion for both children and adults asked if they had ever used any of the following: Concentrative meditation, mindfulness meditation, spiritual meditation, progressive relaxation, guided-imagery, yoga, tai-chi, or qi-gong.

Statistical Model:

$$Y = \beta_0 + X_1\beta_1 + X_2\beta_2 + X_3\beta_3 + \varepsilon$$

	Odds Ratio	95% Confidence Interval
1. Parent Use of Mind Body Practice	5.65**	(4.38, 7.27)
2. Child Characteristics		
Sex		
Male	0.43**	(0.33, 0.55)
Female	---	
Race		
White	---	
Hispanic	0.63**	(0.45, 0.88)
Black	1.01	(0.69, 1.48)
Asian	0.63	(0.38, 1.04)
Other	1.22	(0.81, 1.81)
Age		
12-17	0.97	(0.76, 1.23)
4-11	---	
Region		
Northeast	---	
Midwest	0.56**	(0.39, 0.80)
South	0.48**	(0.34, 0.68)
West	0.99	(0.72, 1.36)
Learning Disability	0.88	(0.57, 1.37)
Difficulty w/Emotions/Concentration/Beh/GA	1.25	(0.91, 1.73)
ADHD	0.90	(0.59, 1.37)
Stress	1.76*	(1.13, 2.71)
Depression	1.10	(0.64, 1.89)
Anxiety/Nervous/Worried	1.51	(0.97, 2.37)
3. Family Characteristics		
Family Member with at least College Education	2.23**	(1.69, 2.94)
Family Structure	1.05	(0.82, 1.35)
Low Income	0.99	(0.74, 1.35)
Food Security	1.16	(0.95, 1.41)
Intercept	0.04**	(0.03, 0.07)

*p<0.05; **p<0.01

Data source: 2012 National Health Interview Survey

N=5,988

Propensity Score Matching

- Propensity Score and Propensity Score Matching were used to estimate the effect of the treatment (parent use of MBP's) on the outcome (child use of MBP's) by accounting for the covariates (personal and environmental factors) that predict receiving the treatment.
- Using the propensity score as a covariate in a logistic regression model revealed that if a child had a parent who used a MBP, the odds of them using a MBP increased by 1.62 ($p < 0.01$, $CI = 1.37 - 1.88$) when compared to those who did not have a parent who used a MBP.
- Propensity Score Matching (PSM) when using nearest neighbor match, indicated that children who had a parent that used a MBP were 16% more likely ($t = 11.28$) to use a MBP themselves.

Discussion

1. If a child has a parent who has used a MBP they are much more likely to have used a MBP
2. This finding is consistent with previous studies that have shown the association between parent use of complementary and alternative medicine (CAM) and their child's use of CAM (Barnes et al, 2008; Birdee et al, 2010; Wilson & Klein, 2002)
3. The main finding is likely to occur through observational learning, where an individual acquires behavior through observing the behavior of models within their environment
4. Design MBP programs that target parents and also both parents and their children
5. Cross-section, parent reporting, attrition, small number of child MBP

Conclusion

1. Parent use of MBP can influence their children's use of MBP through observational learning
2. Future research should investigate other determinants of MBP's for youth. I hope to investigate the determinants of adolescent meditation practice for my dissertation
3. This study is the first to identify the determinants of MBP's for youth. With knowledge from this study, program designers can develop MBP programs that help youth adopt a behavior that helps to promote self-regulation which is a key factor for success in life

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