

## Introduction

- ❖ **Attachment:** adult attachment styles informed by early learning experiences that shape self perceptions, expectations of others, and emotion regulation strategies (Bowlby, 1969, 1973).
  - ❖ *Attachment Anxiety:* hyperactivating strategies (e.g., rumination) intended to maintain proximity and reduce anxiety.
  - ❖ *Attachment Avoidance:* deactivating strategies (e.g., suppression) intended to maintain autonomy due to interpersonal mistrust.
- ❖ **Emotion Regulation:**
  - ❖ **Mindfulness (MF):** tendency to attend to present experience without expectation or judgment; generally considered an adaptive response to emotional experience (Brown et al., 2007).
  - ❖ **Anxiety Sensitivity (AS):** fear of arousal related somatic sensations (“fear of fear”; Reiss, 1991)
- ❖ Mounting evidence for inverse relationship between these two emotion regulation strategies (AS/MF) in both normative and clinical samples (Luberto et al., 2011; Macaulay, Watt et al., 2015; McCracken & Keogh, 2009)
- ❖ **Personality Traits:** DSM-5 (2013) includes hybrid model by which dimensional personality traits are coupled with impairment in self- and interpersonal functioning to characterize personality disorders (PDs)

### BPD

Unstable self-image, emotions (anger, anxiety), and relationships (mistrust, separation anxiety)

### ASPD

Disregard for societal norms and safety of others; emotional irritability, impulsivity, aggressiveness; deceptive

- ❖ **Attachment anxiety** linked to both AS (Macaulay et al., 2015), and BPD (Mikulincer & Shaver, 2007); link between insecure attachment and BPD mediated by low levels of MF (Fossati et al., 2011). Low MF also associated with ASPD (Velotti et al., 2015).
- ❖ Fossati et al. (2012) found low levels of MF significantly predicted features of Borderline (BPD) and Antisocial (ASPD) PDs.

## Research Question

- ❖ Which of these two emotion regulation strategies - MF or AS - better accounts for relations between attachment (anxiety/avoidance) and two PDs characterized by emotion dysregulation: BPD and ASPD?

## Hypotheses

1. Attach anxiety → high AS / low MF → ASPD /BPD
2. High AS and low MF → BPD
3. Low MF (vs. high AS) → ASPD

## Method

- ❖ **Participants**
  - 450 undergraduates (75% female); 83.7% Euro-Canadian ( $M_{age} = 18.3 (2.5)$  years (range = 17-37)
- ❖ **Measures**
  - *Experiences in Closer Relationships – Revised* (ECR-R; Fraley et al., 2000)
  - *Anxiety Sensitivity Index-3* (ASI-3; Taylor et al., 2007)
  - *Personality Inventory for DSM-5* (PID-5-BF; Krueger et al., 2013)
  - *Five Facet Mindfulness Questionnaire* (FFMQ; Baer et al., 2006)

## Mediation Analyses

Mediation Analyses: Effect of Attachment Dimensions on Personality Disorder Profiles Through Anxiety Sensitivity and Mindfulness

Predictor (X)	Mediator (M)	Criterion (Y)	Model $R^2$	Total effect (c' path)	Direct effect (c path)	Indirect effect (ab path)	
						PE (SE)	BC 95% CI
ECR-R Anxiety	AS	BPD	.37***	1.15 (0.13)***	0.50 (0.12)***	0.30 (0.06)*	[0.20, 0.43]
						0.35 (0.06)*	[0.24, 0.48]
	MF	ASPD	.10***	0.54 (0.11)***	0.33 (0.12)**	0.04 (0.05)	[-0.06, 0.13]
						0.17 (0.05)*	[0.08, 0.29]
ECR-R Avoidance	AS	BPD	.34***	0.40 (0.15)**	-0.06 (0.12)	0.18 (0.06)*	[0.08, 0.30]
						0.28 (0.06)*	[0.17, 0.42]
	MF	ASPD	.34***	0.58 (0.11)***	0.43 (0.11)***	0.03 (0.02)	[-0.01, 0.09]
						0.12 (0.04)*	[0.05, 0.21]

Note: Mediation analyses conducted using  $k = 10,000$ ; ECR-R = Experiences in Close Relationships - Revised; AS = anxiety sensitivity; MF = mindfulness; BPD = borderline personality disorder; ASPD = antisocial personality disorder.  
\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

## Summary & Discussion

- ❖ As predicted, low MF and high AS were equally potent mediators of the relationship between both attachment anxiety and avoidance and BPD. Insecure individuals endorse less than optimal emotion regulation strategies and would likely find anxiety-related somatic sensations (high AS) to be particularly distressing and would avoid attending to present affect (low MF).
- ❖ MF was sole mediator between attachment anxiety and ASPD and between attachment avoidance and ASPD. The latter suggests that individuals high in attachment avoidance withdraw from interpersonal relationships, having less need to acknowledge present emotional states. Avoiding social contact may influence deficits in reflecting on mental and emotional states. The former finding is more difficult to explain. It would appear that among individuals endorsing ASPD traits, a strategy to suppress or deactivate emotion is more likely to be utilized than a hyperactivating strategy.

### IMPLICATIONS

- ❖ BPD and ASPD are highly prevalent in forensic settings, both associated with high rates of recidivism, and are frequently comorbid (Black et al., 2010). High rates of ASPD/BPD comorbidity may indicate an underlying biological commonality, which suggests that targeting transdiagnostic risk factors (AS & MF) may be a fruitful avenue for prevention and treatment.
- ❖ As it stands, meditation practices have been shown to be effective in treatment individuals with both BPD (Ellices et al., 2016) and ASPD (Velotti et al., 2016), as well as offenders who are generally at high risk for recidivism (Morley, 2017).

## Selected References

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