

## INTRODUCTION

- Adaptive regulation of emotions, maternal depression, and parenting stress have all been related to adolescent psychosocial outcomes (e.g., Beardslee, Bemporad, Keller, & Klerman, 1983; Feng, Shaw, Skuban, & Lane, 2007; Lovejoy, Graczyk, O'Hare, & Neuman, 2000; Miller-Slough & Dunsmore, 2016; Nelson, O'Brien, Blankson Calkins, & Keane, 2009).
- Considering these established relations, the current study examined a serial mediation model in which it was hypothesized that (1) maternal distress would positively relate to adolescent externalizing behaviors directly and (a) indirectly through maladaptive maternal emotion socialization (ES) practices (i.e., magnify, neglect, and punish), (b) indirectly through adolescent emotion regulation (ER) difficulties, and (c) indirectly through both maternal ES practices and adolescent ER difficulties; (2) maternal distress would positively relate to adolescent ER difficulties (directly and indirectly through maladaptive maternal ES practices); and (3) accounting for initial maternal distress, maladaptive maternal ES practices would positively relate to adolescent externalizing behaviors (directly and indirectly through adolescent ER difficulties).

## METHOD

### Participants

- Participants were 206 maternal caregiver-adolescent dyads.
  - Children were ages 11 to 17 years ( $M = 14.18$ ;  $SD = 1.90$ ), roughly half were male (51.5%), and the majority were identified as Caucasian (76.7%).
  - Maternal caregivers were ages 29 to 60 years ( $M = 41.08$ ;  $SD = 7.47$ ), roughly half were married (58.3%), and the majority were identified as Caucasian (82.0%).

### Measures

- Caregivers completed a battery of measures including: Depression Anxiety Stress Scale (DASS), Parenting Stress Scale (PSS), Strengths and Difficulties Questionnaire (SDQ), and Parent-rating of Reactive and Proactive Aggression (PRPA)
- Children were administered: Emotions as a Child Scales (ECS) and Difficulties in Emotion Regulation Scale (DERS)
- Standardized composites were created for maternal distress and adolescent externalizing behaviors.
  - Maternal distress: Maternal depression from the DASS and maternal parenting stress from the PSS
  - Adolescent externalizing behaviors: Externalizing scale from the SDQ conduct problems scale, PRPA reactive scale, and the PRPA proactive scale

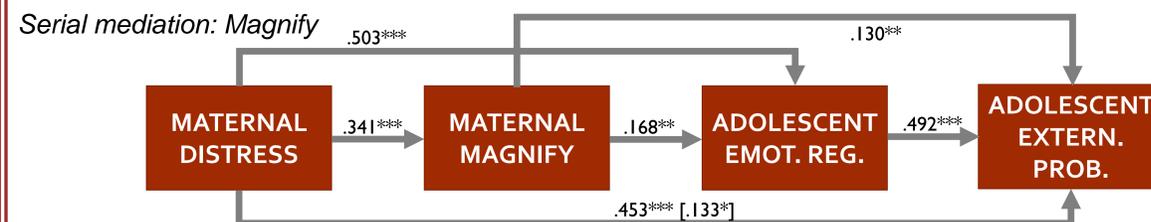
### Procedure

- This project was approved by and conducted in compliance with the Institutional Review Board as part of a larger study.
- Participants were recruited through an online data management company (i.e., Qualtrics).
- An equal amount of responses across socioeconomic status were collected by sampling from three income brackets (i.e., \$0-\$24,999, \$25,000-\$49,999, \$50,000 and above) to assure variability in SES - a crucial demographic variable for this study.
- Caregivers provided informed consent and children provided assent prior to data collection.
- Participants were provided with a monetary incentive after completing the study ranging between \$5 to \$12 per dyad, depending on recruitment source.

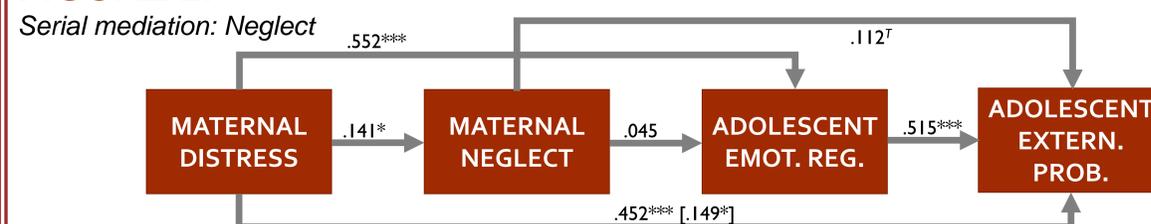
## RESULTS

- Path analyses were conducted for each emotion socialization practice (i.e., magnify, neglect, and punish) resulting in three separate models (see Figures 1, 2, and 3).
- Results indicated that maternal distress is a significant predictor of emotional processes as well as externalizing behaviors among adolescents.
  - The more a maternal caregiver experiences distress, the more likely she is to engage in maladaptive emotional socialization practices, which then relates to more emotion regulation difficulties in adolescents leading to further externalizing difficulties.
  - Thus, the serial mediational model was supported but only fully supported for magnification and punishment of emotions, not neglecting.
    - Magnify as ES practice:  $\beta = .028$ ,  $CI = [.007, .061]$
    - Punish as ES practice:  $\beta = .012$ ,  $CI = [.001, .030]$

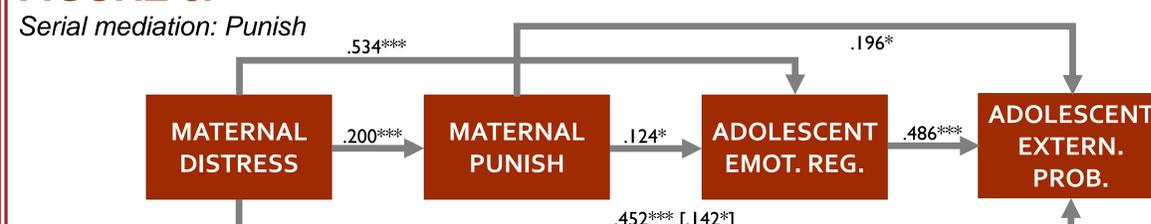
**FIGURE 1.**



**FIGURE 2.**



**FIGURE 3.**



Note. Maternal age and adolescent age were accounted for as covariates in the Figure 1. Maternal age, adolescent age, and adolescent race were accounted for as covariates in Figures 2 and 3. Statistics represented are standardized coefficients. Statistic in brackets represents the direct effect. See Table 1 for indirect effects.

<sup>T</sup> $p < .10$ . \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

**TABLE 1. INDIRECT EFFECTS**

INDIRECT EFFECTS	MAGNIFY	NEGLECT	PUNISH
MD → ES <sup>a</sup> → EXTERNALIZING	.045 [.012, .093]	.016 [.000, .053]	.039 [.009, .108]
MD → ER → EXTERNALIZING	.247 [.173, .364]	.285 [.204, .410]	.260 [.184, .378]
MD → ES <sup>a</sup> → ER → EXTERNALIZING	.028 [.007, .061]	.003 [.000, .014]	.012 [.001, .030]

Note. MD = Maternal Distress, ES = Emotion Socialization, ER = Emotion Regulation Difficulties. Statistics in brackets represent bootstrap confidence intervals. All other statistics represent standardized path coefficients.

<sup>a</sup> Emotion socialization represents a place holder for the specific emotion socialization examined in each model, which is indicated by the column header (i.e., Magnify, Neglect, or Punish).

## DISCUSSION

- Overall, findings suggest that when maternal caregivers experience increased distress and subsequently engage in increased magnification of emotions (e.g., crying with the adolescent) or punishing of emotions (e.g., making comments that shame the adolescent's emotional expression), the adolescent's ability to then regulate his/her own emotions and subsequently refrain from externalized behaviors is impaired.
- Thus, parental emotion socialization practices may be an appropriate target of intervention for adolescents with externalizing behaviors, particularly if mothers are distressed.