

**THE IMPACT OF EMOTIONAL LABOR ON BURNOUT OVER TIME:  
HOW EMOTIONAL WORK IMPACTS WELL-BEING AT WORK**

by

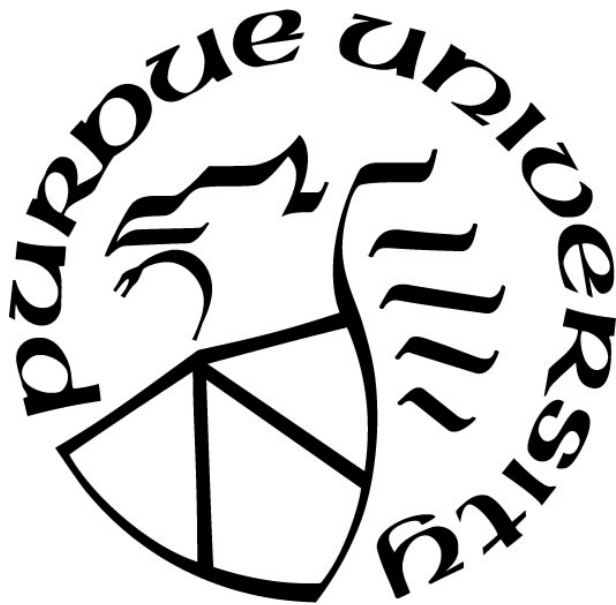
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## TABLE OF CONTENTS

|   |    |
|---|----|
| LIST OF TABLES .....                                  | 4  |
| LIST OF FIGURES .....                                 | 6  |
| ABSTRACT .....  | 9  |
| INTRODUCTION .....                                    | 11 |
| What is Burnout? .....                                | 11 |
| Employee Characteristics and Burnout .....            | 12 |
| Theory of Burnout .....                               | 12 |
| What is Emotional Labor? .....                        | 13 |
| Surface Acting .....                                  | 14 |
| Deep Acting .....                                     | 14 |
| Consequences of Emotional Labor .....                 | 15 |
| How do Surface Acting and Deep Acting Interact? ..... | 17 |
| Emotional Labor and Mental Health .....               | 17 |
| PRESENT STUDY .....                                   | 19 |
| Hypotheses .....                                      | 19 |
| METHODS .....   | 21 |
| Procedures .....                                      | 21 |
| Measures .....  | 22 |
| Demographics Questionnaire .....                      | 22 |
| Burnout .....   | 22 |
| Emotional Labor .....                                 | 22 |
| Data Analysis .....                                   | 23 |
| Data Cleaning and Statistical Assumptions .....       | 23 |
| Data Analyses for Research Questions .....            | 24 |
| RESULTS .....   | 27 |
| Sample Characteristics .....                          | 27 |
| Hypothesis Testing .....                              | 27 |
| Research Questions #1 and #2 .....                    | 27 |
| Emotional Exhaustion .....                            | 27 |
| Depersonalization .....                               | 28 |

|   |    |
|---|----|
| Personal Accomplishment .....                           | 28 |
| Research Questions #3 and #4.....                       | 28 |
| Surface Acting Predicting Emotional Exhaustion .....    | 28 |
| 3 months .....  | 28 |
| 6 months .....  | 29 |
| 12 months .....   | 29 |
| Surface Acting Predicting Depersonalization .....       | 29 |
| 3 months .....  | 29 |
| 6 months .....  | 30 |
| 12 months .....   | 30 |
| Surface Acting Predicting Personal Accomplishment ..... | 30 |
| 3 months .....  | 30 |
| 6 months .....  | 31 |
| 12 months .....   | 31 |
| Deep Acting Predicting Emotional Exhaustion.....        | 32 |
| 3 months .....  | 32 |
| 6 months .....  | 32 |
| 12 months .....   | 32 |
| Deep Acting Predicting Depersonalization .....          | 33 |
| 3 months .....  | 33 |
| 6 months .....  | 33 |
| 12 months .....   | 33 |
| Deep Acting Predicting Personal Accomplishment .....    | 33 |
| 3 months .....  | 33 |
| 6 months .....  | 34 |
| 12 months .....   | 34 |
| Research Question #5 .....                              | 35 |
| Cross sectionally.....                                  | 35 |
| Longitudinally .....                                    | 35 |
| DISCUSSION.....   | 36 |
| Surface Acting and Burnout .....                        | 36 |
| Emotional Exhaustion .....                              | 37 |

|  |    |
|--|----|
| Depersonalization .....  | 39 |
| Personal Accomplishment .....  | 40 |
| Deep Acting and Burnout .....  | 41 |
| Does Deep Acting Buffer the Impact of Surface Acting on Burnout? ..... | 41 |
| Limitations .....  | 43 |
| Conclusion .....   | 46 |
| REFERENCES .....   | 47 |
| TABLES .....   | 58 |
| FIGURES .....  | 64 |

**LIST OF TABLES**

|               |    |
|---------------|----|
| Table 1 ..... | 58 |
| Table 2 ..... | 59 |
| Table 3 ..... | 60 |
| Table 4 ..... | 61 |
| Table 5 ..... | 62 |
| Table 6 ..... | 63 |

**LIST OF FIGURES**

|                |    |
|----------------|----|
| Figure 1.....  | 64 |
| Figure 2.....  | 64 |
| Figure 3.....  | 65 |
| Figure 4.....  | 65 |
| Figure 5.....  | 66 |
| Figure 6.....  | 67 |
| Figure 7.....  | 68 |
| Figure 8.....  | 69 |
| Figure 9.....  | 70 |
| Figure 10..... | 70 |
| Figure 11..... | 71 |
| Figure 12..... | 72 |
| Figure 13..... | 73 |
| Figure 14..... | 74 |
| Figure 15..... | 75 |
| Figure 16..... | 75 |
| Figure 17..... | 76 |
| Figure 18..... | 77 |
| Figure 19..... | 78 |
| Figure 20..... | 78 |
| Figure 21..... | 79 |
| Figure 22..... | 80 |
| Figure 23..... | 81 |
| Figure 24..... | 82 |
| Figure 25..... | 82 |
| Figure 26..... | 83 |
| Figure 27..... | 84 |
| Figure 28..... | 85 |
| Figure 29..... | 86 |
| Figure 30..... | 86 |

|                |    |
|----------------|----|
| Figure 31..... | 87 |
| Figure 32..... | 88 |
| Figure 33..... | 89 |
| Figure 34..... | 90 |
| Figure 35..... | 90 |



## ABSTRACT

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Title: The Impact of Emotional Labor on Burnout Over Time: How Emotional Work Impacts Well-Being at Work.

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Burnout is the emotional, mental, and physical strain associated with prolonged work stress (Maslach, Jackson, & Leiter, 1986). Although this is a problem in many professions, mental health providers are at a heightened risk of burnout (Salyers et al., 2015). One of the reasons for this increase in burnout may be the demands put on mental health workers to manage their own emotions while dealing with the intense emotional and mental health situations of their clients. Emotional labor, or the management of emotions at work, is conceptualized as two different emotion regulation strategies: surface acting and deep acting (Grandey, 2000). Surface acting, or faking emotions, has been associated with significant mental health and job-related problems, including burnout in populations such as call center employees and service workers. The psychological impact of deep acting, or internally attempting to change your emotions, is less clear, and may actually be associated with positive outcomes (Hülshager & Schewe, 2011). However, little work has looked at the impact of emotional labor on mental health providers. The current study aims to examine how surface acting and deep acting are related to burnout over time in mental health providers. The proposed study is secondary analysis from a Patient Centered Outcomes Research Institute (PCORI) funded trial “The impact of burnout on patient-centered care: A comparative effectiveness trial in mental health (Salyers et al., 2018). 193 Clinicians reported burnout symptoms and frequency of employing emotional labor strategies at baseline, with 127 clinicians completing all four time-points: baseline, 3 months, 6 months, and 12 months. Data were analyzed using multiple regression analyses and cross-lagged panels to

examine the impact of surface acting and deep acting on burnout over the course of 12 months. Surface acting was significantly associated with all three dimensions of burnout (emotional exhaustion, depersonalization and reduced personal accomplishment) cross-sectionally. Using cross-lagged panel models, depersonalization at baseline significantly predicted surface acting three and six months later. Surface acting and personal accomplishment had a bidirectional relationship: increased surface acting at baseline was associated with personal accomplishment at three months and decreased personal accomplishment at baseline was associated with increased surface acting at three and six months. Deep acting moderated the relationship between surface acting and personal accomplishment at baseline, but not longitudinally. The current study is the first study that has examined the relationship between surface acting and burnout in community mental health professionals. While surface acting may not result in burnout three months later for dimensions other than personal accomplishment, two dimensions of burnout (depersonalization and decreased personal accomplishment) were associated with higher levels of surface acting three and six months later. This suggests that surface acting may have consequences for feelings of accomplishment at work, but more so, may be used as a coping mechanism in reaction to some aspects of burnout.

## INTRODUCTION

Mental health providers (“providers”) have high emotional demands associated with their jobs. They are exposed to intense emotional suffering, traumatic life events, and suicidal ideation from their clients (Sjøløe, Binder, & Dundas, 2017). Providers must manage their own emotional response, as well as manage the emotional responses of their clients, in order to do their job effectively (Rupert & Morgan, 2005). Burnout, a prolonged response to chronic emotional and interpersonal stressors at work (Maslach, Schaufeli, & Leiter, 2001), is a prevalent and serious problem for providers. While it is important for mental health providers to act effectively in a crisis and provide empathy to clients, burnout may inhibit a provider’s ability to provide high quality care (Fisk, Rakfeldt, Heffernan, & Rowe, 1999).

### **What is Burnout?**

Burnout is a wide spread problem in helping professions (Maslach & Goldberg, 1998). Between 21% to 67% of mental health professionals report that they experience high levels of burnout (Morse et al., 2012). The term “burnout” refers to the emotional, physical, and mental exhaustion that generally accompanies prolonged job-related stress. Three dimensions of burnout have been identified: overwhelming emotional exhaustion from chronic interpersonal stress, feelings of cynicism and depersonalization with regard to the job and clients, and a sense of ineffectiveness and lack of personal accomplishment at work (Maslach et al., 1986). Burnout is not only associated with mental health problems such as depression, but it is also associated with physical health problems (Peterson, Demerouti, Bergström, Åsberg, & Nygren, 2008), greater absenteeism (Borritz et al., 2006), and intentions to quit (Salyers et al., 2015). Due to these variables, burnout has significant financial costs for the organization (Waldman, Kelly, Aurora, & Smith, 2004). Finally, burnout can result in poor client care (Happell & Koehn, 2011),

including more negative views of clients, higher self-reported treatment errors, neglect of job duties, and lower client satisfaction ratings (Happell & Koehn, 2011; Holmqvist & Jeanneau, 2006; Salyers et al., 2015).

### **Employee Characteristics and Burnout**

There is evidence that certain employee characteristics may influence burnout. Specifically, age appears to be the strongest predictor of burnout, with younger employees significantly more likely to experience burnout than older employees (Brewer & Shapard, 2004; Duquette, Kérowc, Sandhu, & Beaudet, 1994; Garrosa, Moreno-Jimenez, Liang, & Gonzalez, 2008; Purvanova & Muros, 2010; Schaufeli & Enzmann, 1998). In addition, gender may play a small, but meaningful effect in burnout. A recent meta-analysis found that women were slightly more likely to experience overall burnout (effect size = .18) and emotional exhaustion (effect size = .10) than men, while men were more likely to experience depersonalization than women (effect size = -.19) (Purvanova & Muros, 2010). Therefore, age and gender may be important variables to consider when studying burnout.

### **Theory of Burnout**

The Job Demands-Resources model of burnout suggests that burnout occurs over time when demands of the job are greater than the available resources to the employee (Bakker & Demerouti, 2007; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Job demands are defined as aspects of the job that require sustained physical, emotional, or physiological costs, such as emotionally demanding clients (Demerouti et al., 2001). On the other hand, job resources are the aspects of the job that are functional in achieving work goals, reducing job demands and the associated psychological costs, or stimulating personal growth, learning or development (Bakker, Albrecht, & Leiter, 2011; Bakker & Demerouti, 2007, 2014). Resources (e.g. social support, autonomy, opportunities for development) have consistently been shown to buffer against

negative psychological and professional outcomes when faced with job demands (Bakker & Demerouti, 2007; Hakanen, Bakker, & Demerouti, 2005; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007).

Given that emotional exhaustion is a hallmark symptom of burnout, strategies people use to manage the emotional demands of work, as well as conserve emotional and cognitive resources, are important to consider. It has been argued that certain forms of emotion regulation can be harmful because they drain resources (Brotheridge & Lee, 2002; Grandey, 2003). An emotion regulation strategy called “emotional labor,” although not specifically studied in providers, has been associated with burnout in other helping professions (Hülshager & Schewe, 2011; Kammeyer-Mueller et al., 2013). Considering the great emotional demands placed on mental health providers, they may be employing emotional labor strategies at higher rates than other professions.

### **What is Emotional Labor?**

First coined by sociologist Arlie Russell Hochschild in her book *The Managed Heart: The Commercialization of Feeling*, emotional labor refers to “the management of feeling to create a publicly observable facial and bodily display” (p. 7). Emotional labor is the act of effortfully changing one’s emotional experience to display certain expected or acceptable emotions (Coté, 2005; Hochschild, 1983). These expectations, either explicitly stated or inferred, are placed upon employees to handle challenging emotional and cognitive situations while displaying expected emotions when interacting with clients or customers (Rafaeli & Sutton, 1989). Research indicates that employees do not automatically change their internal emotional responses to fit these expectations (Sharpe, 2005), and the laborious task of displaying emotions that conflict with internal states has been coined ‘emotional labor’ (Hochschild, 1983).

Emotional labor consists of two separate emotion regulation strategies: *surface acting* and *deep acting* (Grandey, 2000; Holman, Martinez-Iñigo, & Totterdell, 2008).

### **Surface Acting**

Surface acting is the act of masking one's true emotional response while pretending to feel a different way (Steinberg & Figart, 1999). In essence, the individual is not actually feeling (or trying to feel) the emotion they are portraying. For example, a mental health provider may be overwhelmed and irritable, but when a client demands a few minutes of her time, she may smile and say "of course", when in reality she is annoyed and frustrated with the client. She may do this in order to conform to the expectations of the organization, as well as conform to what she believes to be expectations for professional behavior. In another example, a mental health provider may be having a great day and be very cheerful; however, she pretends to act distressed when speaking with a distressed client, without actually attempting to feel that emotion. In both of these examples, there is a discrepancy between the emotional expression of the provider and her inner state.

### **Deep Acting**

Deep acting is the effortful task of attempting to change one's internal state to match the emotion one is expressing. In this emotional regulation strategy, the employee attempts to match her true emotions with the emotions the employee wants to convey, and thus results in responding in an authentic manner (Gross, 1998; Gross & John, 2003). For example, in the previously mentioned example of a mental health provider who is overwhelmed and irritable, if she engaged in deep acting, she may work hard to focus on what the client needs rather than their demanding tone. She also may choose to take the perspective of the client, instead of focusing on her own distress. While surface acting is essentially feigning empathy, deep acting is an effort to actually feel empathy. Thus, although similar to empathy, deep acting is the labor associated

with feeling empathetic, including when those feelings may not come easily. This attempt to feel those emotions results in more authentic emotional experiences, and less conflict between inner emotion and perceived rules of what emotions should be expressed.

### **Consequences of Emotional Labor**

Although both are considered “emotional labor,” surface acting and deep acting have different psychological consequences, relating differently to adjustment, well-being, and performance outcomes (Coté, 2005; Hülshager & Schewe, 2011; Zapf & Holz, 2006). As described in the meta-analyses by Hülshager and Schewe (2011) and Kammeyer-Mueller et al. (2013), surface acting has a consistent and strong positive association with emotional exhaustion, depersonalization, psychological strain, psychosomatic complaints, decreased job satisfaction, and decreased organizational attachment. In contrast, deep acting is unassociated with these negative outcomes, and may actually be beneficial. Hülshager and Schewe (2011) argue that these emotion regulation strategies relate differently to well-being and performance outcomes due to ego depletion: surface acting depletes cognitive resources more than deep acting.

Surface acting requires constant effort through the monitoring of desired and felt emotions, which leads to strain and diminished well-being (Coté, 2005; Grandey, 2003; Martínez-Iñigo, Totterdell, Alcover, & Holman, 2007). Even though research has suggested there are immediate mood benefits of positive facial expressions (Kleinke, Peterson, & Rutledge, 1998; Lyubomirsky, King, & Diener, 2005; Tomkins, 1962), the overall effects of ongoing faking of emotions is thought to be a drain on emotional resources and may be *causing* burnout over time. Surface acting depletes resources, which may cause a negative mood, which, in turn, creates a heightened need for surface acting (Judge, Woolf, & Hurst, 2009). This surface acting may deplete the employees’ resources even further, and over time results in increased emotional exhaustion. Research suggests the inauthenticity of surface acting in customer service employees

can also be detected by the customer during the interaction (Judge et al., 2009; Zhan, Wang, & Shi, 2016). The authenticity of positive displays is directly related to how friendly the customers perceive the employee to be, and that those who engage in surface acting are less likely to be well liked by customers (Grandey, Fisk, Mattila, Jansen, & Sideman, 2005). A study found that call center employees who engage in surface acting actually receive more negative treatment from customers, which increases the employee's negative affect and emotional exhaustion (Zhan et al., 2016). When an employee engages in surface acting, the customer may perceive the employee as manipulative and unempathetic. This negative interaction may directly result in increased burnout of the provider over time.

The literature looks different for those engaging in "deep acting." The cognitive effort required to change emotions (deep acting) is significantly less than faking these emotions (surface acting) (Totterdell & Holman, 2003); in fact, deep acting has been associated with decreased psychological strain (Hülshager & Schewe, 2011). Although the meta-analysis completed by Hülshager and Schewe (2011) did not find any significant relationship between deep acting and emotional exhaustion or cynicism, deep acting did result in significantly greater personal accomplishment, as well increased emotional performance and customer satisfaction. Similarly, Kammeyer-Mueller et al. (2013) used a meta-analytic structural model to test the effects of deep acting on stress and job performance. Even after controlling for dispositional factors (i.e. personality traits) and display rules (perceptions around what emotions should or should not be expressed), deep acting was positively related to job performance and satisfaction, while unrelated to emotional exhaustion. Employee deep acting may have indirect benefits on employee-customer interactions as well. Customers tend to perceive employees using deep acting to be more customer-oriented, which leads to better interactions (Groth, Hennig-Thurau, & Walsh, 2009) and more positive treatment of the employee by the customers (Yagil & Medler-



Liraz, 2016; Zhan et al., 2016). This has been shown to increase positive affect associated with the job (Quinones, Rodríguez-Carvajal, & Griffiths, 2017). Better customer interactions and increased positive affect may free up cognitive resources to do the job more effectively, resulting in better attitudes towards the company or organization (Quinones et al., 2017). Therefore, deep acting may have increased benefits over time.

### **How do Surface Acting and Deep Acting Interact?**

Even though surface acting and deep acting are often studied separately, the two strategies are correlated, suggesting that people engage in both strategies (Beal & Trougakos, 2013; Gabriel, Daniels, Diefendorff, & Greguras, 2015; Gabriel & Diefendorff, 2015; Hülshager & Schewe, 2011). Addressing this gap in the literature, Gabriel et al. (2015) used latent profile analysis to separate service workers into five categories based on the frequency they employ surface acting and deep acting: *surface actors* (high surface acting, low deep acting), *regulators* (high surface acting, high deep acting), *deep actors* (high deep acting, low surface acting), *low actors* (moderate levels of both surface acting and deep acting), and *non-actors* (extremely low levels of both surface acting and deep acting). They found surface actors had the worst well-being outcomes. Regulators (high deep acting, high surface acting) had better well-being outcomes than surface actors, but worse than deep actors, non-actors, or low actors. This suggests that although high levels of surface acting negatively impact adjustment, deep acting may in part buffer against the harmful effects of surface acting. However, this has not been examined longitudinally.

### **Emotional Labor and Mental Health**

Little is known about the emotional labor demands in mental healthcare workers and the consequences of those demands. Only one study was identified that examined emotional labor in mental healthcare. This study, conducted by Mann and Cowburn (2005) examined the

relationship between emotional labor and work stress in mental health nurses. The researchers found emotional labor strategies were employed at high rates in mental health nurses, with 82% of nurses reporting moderate to high levels of emotional labor daily (Mann & Cowburn, 2005). While Mann and Cowburn (2005) found that both surface acting and deep acting were associated with work stress, they did not examine how each strategy differentially predicted adjustment outcomes. Because little is known about how emotional labor relates to burnout in mental health workers, more research is needed.

## PRESENT STUDY

The aim of the current study was to examine the impact of different emotional labor strategies on burnout over time in mental health workers. We measured emotional labor and burnout in mental health providers at four separate time points: baseline, three months, six months, and 12 months. Because most studies examining emotional labor and burnout have been cross-sectional or had brief follow up periods, the current study expands prior research by employing a longitudinal design. In addition, although the emotional-labor burnout connection has been established in a number of populations (e.g. Chung & Han, 2014; Hülshager & Schewe, 2011; Kinman, Wray, & Strange, 2011; Lam & Chen, 2012), to my knowledge this is the first study that has examined the connection in community mental health providers.

I hypothesized that surface acting would be associated with burnout cross-sectionally and prospectively and that deep acting would not be associated with emotional exhaustion and depersonalization over time but would be positively associated with personal accomplishment at baseline and over time. In addition, I predicted that at baseline and 3 months, higher rates of deep acting at baseline would buffer the relationship between surface acting and burnout.

### Hypotheses

1. Surface acting at baseline would be positively related to emotional exhaustion and depersonalization, and inversely with personal accomplishment at baseline.
2. Deep acting at baseline would be positively related with personal accomplishment at baseline, but not to other dimensions of burnout at baseline.
3. Surface acting at baseline would be associated with increased levels of emotional exhaustion and depersonalization, as well as decreased personal accomplishment over time.

4. Deep acting at baseline would positively predict personal accomplishment over time but will be unrelated to other dimensions of burnout.
5. Deep acting at baseline would moderate the relationship between surface acting at baseline and burnout (emotional exhaustion, depersonalization, and increased personal accomplishment) at baseline and 3 months later. Specifically, higher levels of deep acting would weaken the relationship between surface acting and dimensions of burnout.

## METHODS

### Procedures

This is a secondary analysis of data that were collected as part of a Patient Centered Outcomes Research Institute (PCORI) funded trial “The impact of burnout on patient-centered care: A comparative effectiveness trial in mental health” (Salyers et al., 2018). This three-year study investigated how clinician burnout impacts patient care in the context of testing the effectiveness of an intervention to reduce burnout called Burnout Reduction: Enhanced Awareness, Tools, Handouts, and Education (BREATHE; Salyers et al., 2011). Although the larger study recruited both clinicians and patients, the current study focused on measures administered to clinicians. Clinicians were recruited from two community health centers to take part in a new intervention aimed at decreasing burnout. Participants were active employees at Four County or Places for People who provided direct care. In addition, participants were willing to complete an interview and an online survey at baseline, 3 months, 6 months, and 12 months. The proposed study used data from the online survey at all four time points. The online survey at each time point lasted between 20-30 minutes, and participants were compensated a \$10 gift card to amazon.com upon completion of each survey. Although many measures were included in online survey, the current study focused on a subset of those surveys assessing background demographic information, symptoms of burnout, and managing emotions at work.

## Measures

### Demographics Questionnaire

All participants completed a measure assessing demographics including age, gender, and race/ethnicity categories. This measure also assessed education level, discipline of education, program/service type, job tenure, and time in mental health field. In addition, the measure included information related to job demands including hours per week worked, presence of supervision responsibilities, caseload size, hours worked beyond those scheduled, and populations served.

### Burnout

Burnout was assessed with the Maslach Burnout Inventory (Maslach & Jackson, 1981). This is a widely used inventory assessing three essential components of burnout: emotional exhaustion (e.g. *"I feel emotionally drained at work"*), depersonalization (e.g. *"I've become more callous toward people since I took this job"*), and personal accomplishment (e.g. *"I deal effectively with problems at work"*). Burnout is conceptualized as increased emotional exhaustion and depersonalization, as well as decreased personal accomplishment. Item response scales range from never (0) to every day (6). Means were calculated for each of the subscales to represent overall measure of emotional exhaustion, depersonalization, and personal accomplishment. The subscales have shown good internal consistency, stability over time, and convergent validity with related constructs (Maslach, Jackson, & Leiter, 1996). For the current sample, all Cronbach alphas were over .70, which are adequate for analyses (Emotional exhaustion alpha= .92; Depersonalization alpha=.76; Personal accomplishment alpha= .73).

### Emotional Labor

Emotional labor was assessed with the Emotional Labor Scale (Diefendorff, Croyle, & Gosserand, 2005). This 14-item scale assesses emotional labor strategies on three subscales with

responses ranging from strongly disagree (1) to strongly agree (7): surface acting (7 items, “*I show feelings to customers that are different from what I feel inside*”), deep acting (4 items, “*I make an effort to actually feel the emotions that I need to display towards other*”), and genuine emotion (3 items, “*The emotions I show customers match what I spontaneously feel.*”). The genuine emotion scale was not part of the early conceptualization of emotional labor, and the literature does not have consensus on how to use the subscale. Because the vast majority of the research only focuses on the constructs of surface acting and deep acting, the current study will similarly focus on those two constructs of emotional labor. This scale demonstrates good internal consistency and reliability: Surface acting  $\alpha = .91$ , Deep acting = .82 (Diefendorff et al., 2005). Cronbach’s alpha was computed for surface acting (alpha = .92) and for deep acting (alpha = .84), which were considered good for the current sample.

## **Data Analysis**

### **Data Cleaning and Statistical Assumptions**

Prior to conducting preliminary analyses, data were cleaned, and assumptions were checked. Outliers greater than three standard deviations from the mean were winzorized to be within three standard deviations from the mean. Skew and kurtosis absolute values were  $<3.0$  and  $<10.0$ , indicating the distribution was approximately normal and not problematic (Kline, 2011). Scatterplots indicated that the error variance was fairly evenly spread across the individual variables across all time points. No transformations were applied because the statistical assumptions of normality and homoscedasticity were not violated.

Missing data within a survey was minimal. For example, 5% of demographic/background data was missing and 1.5% of scale data was missing at baseline. Mean scores were calculated for people answering 75% of items on a given scale. Burnout was

calculated into three separate means: emotional exhaustion, depersonalization, and personal accomplishment. The emotional labor scale was calculated into two different means: surface acting and deep acting. In addition, I created a surface acting x deep acting interaction term by creating a new variable where I multiplied surface acting at baseline by deep acting at baseline.

Zero order correlations were produced using bivariate correlations for all background variables as well as burnout and emotional labor variables (See Table 1). No two variables were so highly correlated ( $>.8$ ) that they represented the same construct. Correlations between background characteristics and our variables of interest were examined. Although many of them correlated with burnout and emotional labor, there was no theoretical basis to include any of the variables as covariates in our analyses other than age and gender. Descriptive statistics were examined for differences between participants randomized to the motivational interviewing intervention and the BREATHE intervention. Background variables as well as scores on emotional labor and burnout at baseline were not significantly different from each other. In addition, there were no treatment effects of BREATHE on emotional labor or burnout overtime. Given there were no baseline differences and no treatment effects over time, I collapsed clinicians from both treatment conditions into one group for the purposes of this study and did not control for the intervention in the analyses.

### **Data Analyses for Research Questions**

For research questions #1 and #2, I examined the relationship between burnout and emotional labor at baseline, with the addition of covariates. I performed three separate regression analyses predicting (1) emotional exhaustion (2) depersonalization, and (3) personal accomplishment, each with gender, age, surface acting, and deep acting as predictors. Surface acting and deep acting were both included in the model because the strategies are often



correlated and used together (Beal & Trougakos, 2013; Gabriel, Daniels, Diefendorff, & Greguras, 2015; Gabriel & Diefendorff, 2015; Hülshager & Schewe, 2011).

For research questions #3 and #4, I examined the relationship between emotional labor and burnout over time through a sequence of cross-lagged panel models (Bollen, 1989; Little, Preacher, Selig, & Card, 2007; Wu, Selig, & Little, 2013; See Figure 1). I estimated all base models and include all hypothesized path coefficients examining emotional labor predicting burnout across 3 months (see Figure 1), 6 months (see Figure 2), and 12 months (see Figure 3). I tested six separate models: (1) Surface acting predicting emotional exhaustion, (2) Surface acting predicting depersonalization, (3) Surface acting predicting personal accomplishment, (4) Deep acting predicting emotional exhaustion, (5) Deep acting predicting depersonalization, and (6) Deep acting predicting personal accomplishment. I also tested all longitudinal relationships using only two time points in addition to the cross-lagged panel models (Baseline to 6 months & Baseline to 12 months). These models were completely saturated (See Figure 1). At two time intervals, all models fit the data perfectly (i.e. were completely saturated) as all potential paths were accounted for (See Figure 1). To test the impact of important covariates while maintaining adequate power for analyses, age and gender were controlled for in all cross-lagged models containing only two time points (i.e. Baseline to 3 months; Baseline to 6 months; Baseline to 12 months; See Figure 4). I assessed each model for fit using four indices of fit (Hu & Bentler, 1999): Root Mean Square Error of Approximation (RMSEA; values  $<.08$  are acceptable, but  $<.05$  are preferred), Comparative Fit Index (CFI; values  $>.90$  are acceptable but values  $>.95$  are preferred), Tucker-Lewis Index (TLI; values  $>.90$  are acceptable but values  $>.95$  are preferred), and Standardized Root Mean Square Residual (SRMR; values  $<.08$  are acceptable, but values less than  $.06$  are preferred).

For research question #5, I examined whether deep acting buffers the effect of surface acting on burnout at baseline and longitudinally. I conducted six separate multiple regression analyses in SPSS predicting emotional exhaustion, depersonalization, and personal accomplishment at baseline and then at 3 months from emotional labor at baseline including established covariates of age and gender. I introduced covariates of age and gender in step 1, surface acting, deep acting, and the interaction term (surface acting x deep acting) at baseline into step 2. A significant interaction term ( $p < .05$ ) indicated that deep acting moderates the impact of surface acting on emotional exhaustion.

## RESULTS

### Sample characteristics

Out of the total 193 participants with baseline data, the majority were white (84.5%), married (45.1%), and female (80%). The average age was 40.3 years (SD=12.2); clinicians had been in their current position for 3.3 years (SD=4.7) and working in the mental health field for an average of 8.9 (SD=9.0) years. Baseline levels of burnout were low. On average, people reported feeling emotionally exhausted “once to a few times per month” (M=2.5, SD=1.4), depersonalization a little more often than a “few times a year or less” (M=1.3, SD=1.1), and personal accomplishment a little less than a “few times per week” (M=4.9, SD=0.8). On average people generally disagreed that they engaged in surface acting (M=2.2, SD=0.8), but agreed (M=3.3, SD= 0.9) that they engaged in deep acting.

### Hypothesis Testing

#### Research Questions #1 and #2: Does Emotional Labor Predict Burnout at Baseline?

**Emotional Exhaustion.** In the first step, age and gender were entered into the model. This model was significant in predicting emotional exhaustion  $F(2,189)=3.28, p<.05$  and explained 3.4% of the variance in emotional exhaustion. Surface acting and deep acting were then added into the model at step 2. These two variables significantly added to the model ( $F_{\text{change}}(2,187)=36.32, p<.001; \Delta R^2=.27$ ). As hypothesized, surface acting was a significant predictor of emotional exhaustion at baseline ( $\beta=.53, p<.001$ ) and deep acting was not ( $\beta=.01, p=.934$ ). The model accounted for 30.4% of the variance in emotional exhaustion at baseline (See Table 3).

**Depersonalization.** Age and gender accounted for a significant amount of variance in depersonalization ( $F_{\text{change}}(2,189)=5.41, p<.01; \Delta R^2=.05$ ). Surface acting and deep acting were entered into the second step and accounted for a significant amount of the variance in the model ( $F_{\text{change}}(2,187)=28.02, p<.001; \Delta R^2=.22$ ). As hypothesized, surface acting significantly predicted depersonalization ( $\beta=.46, p<.001$ ), and deep acting did not significantly predict depersonalization ( $\beta=.08, p=.222$ ). The overall model explained 27.2% of the variance in depersonalization at baseline (See Table 3).

**Personal accomplishment.** Age and gender accounted for a significant amount of variance in the model ( $F_{\text{change}}(2,189)=3.19, p<.05; \Delta R^2=.03$ ). Surface acting and deep acting significantly added to the model of personal accomplishment at baseline ( $F_{\text{change}}(2,187)=12.06, p<.001; \Delta R^2=.11$ ). As hypothesized, surface acting was a significant predictor of decreased personal accomplishment at baseline ( $\beta=-.35, p<.001$ ). However, contrary to hypotheses, greater levels of deep acting did not significantly predict greater personal accomplishment ( $\beta=.07, p=.349$ ). The overall model explained 14.3% of personal accomplishment at baseline (See Table 3).

### **Research Question #3 and #4: Does Emotional Labor Predict Burnout Over Time?**

#### **Surface Acting Predicting Emotional Exhaustion.**

**3 months.** The cross-lagged panel model predicting emotional exhaustion from surface acting across 3 months was completely saturated and therefore fit the data perfectly (See Figure 5). However, no cross lagged paths were significant; that is, contrary to hypotheses, surface acting did not predict later emotional exhaustion. With the addition of the covariates of age and gender, there were still no significant cross-lagged paths.

**6 months.** The cross-lagged panel model predicting emotional exhaustion from surface acting across 6 months (Baseline, 3 months, and 6 months) provided good fit for the data (See Figure 6; Table 6). No significant cross-lagged paths emerged; however, three-month surface acting predicting six-month emotional exhaustion was trending significance ( $\beta=.11$ ,  $p=.073$ ). The cross-lagged panel model predicting emotional exhaustion and surface acting at two time points (baseline and six months) was completely saturated (see Figure 7). No significant cross-lagged paths emerged. With the addition of the covariates of age and gender, there were still no significant cross-lagged paths.

**12 months.** The cross-lagged panel model predicting emotional exhaustion from surface acting across 12 months (Baseline, 3 months, 6 months and 12 months) provided good fit for the data (See Figure 8; Table 6). The path that was trending towards significance in the six-month model (3-month surface acting predicting 6-month emotional exhaustion) was no longer significant. However, lower rates of emotional exhaustion at 6 months was associated with increased surface acting at 12 months ( $\beta=-.20$ ,  $p=.034$ ). Due to this unexpected finding, another cross-lagged panel model was run using only two time points (6-month surface acting and emotional exhaustion predicting 12 months surface acting and emotional exhaustion). This path was no longer significant ( $\beta=-.02$ ,  $p=.756$ ). The cross-lagged panel model predicting emotional exhaustion and surface acting at two time points (baseline and twelve months) was completely saturated (See Figure 9). There were no significant cross-lagged paths. With the addition of covariates age and gender, there were still no significant cross-lagged paths.

### **Surface Acting Predicting Depersonalization.**

**3 months.** The cross-lagged panel model predicting depersonalization from surface acting at 3 months was completely saturated and therefore fit the data perfectly (See Figure 10). In the cross-lagged model, baseline depersonalization significantly predicted surface acting at 3 months

( $\beta=.15$ ,  $p=.030$ ). However, contrary to hypotheses, surface acting did not predict later depersonalization. With the addition of the important covariates of age and gender, baseline depersonalization significantly predicting 3-month surface acting remained the only significant cross lagged path ( $\beta=.13$ ,  $p=.031$ ).

**6 months.** The cross-lagged panel model predicting depersonalization from surface acting across 6 months (Baseline, 3 months, and 6 months) provided good fit for the data (See Figure 11; Table 6). Baseline depersonalization was still associated with increased surface acting at 3 months ( $\beta=.16$ ,  $p=.012$ ). The cross-lagged panel model predicting depersonalization and surface acting at two time points (baseline and six months) was completely saturated (See Figure 12). Baseline depersonalization predicted increased surface acting at 6 months ( $\beta=.19$ ,  $p=.007$ ). With the addition of age and gender as covariates, baseline depersonalization still predicted surface acting six months later ( $\beta=.16$ ,  $p=.018$ ).

**12 months.** The cross-lagged panel model predicting depersonalization from surface acting across 12 months (Baseline, 3 months, 6 months, and 12 months) provided good fit for the data (See Figure 13; Table 6). Baseline depersonalization still predicted increased surface acting at 3 months ( $\beta=.18$ ,  $p=.005$ ). The cross-lagged panel model predicting depersonalization and surface acting at two time points (baseline and twelve months) was completely saturated (See Figure 14). Baseline depersonalization did not significantly predict surface acting at 12 months; however, this association was trending towards significance ( $\beta=.13$ ,  $p=.073$ ). With the addition of age and gender as covariates, no cross-lagged paths became significant.

### **Surface Acting Predicting Personal Accomplishment.**

**3 months.** The cross-lagged panel model predicting personal accomplishment from surface acting across 3 months was completely saturated and therefore fit the data perfectly (See Figure 15). In the cross-lagged model, baseline personal accomplishment significantly negatively

predicted surface acting at 3 months ( $\beta=-.14$ ,  $p=.048$ ). Baseline surface acting also negatively predicted personal accomplishment at 3 months ( $\beta=-.18$ ,  $p=.018$ ). With the addition of the important covariates of gender and age, no additional cross-lagged paths became significant and no cross-lagged paths lost significance.

**6 months.** The cross-lagged panel model predicting reduced personal accomplishment from surface acting across 6 months (Baseline, 3 months, and 6 months) provided good fit for the data (See Figure 16; Table 6). Baseline personal accomplishment was still negatively predicted surface acting at 3 months ( $\beta=-.17$ ,  $p=.005$ ), and baseline surface acting still negatively predicted personal accomplishment at 3 months ( $\beta=-.17$ ,  $p=.012$ ). The cross-lagged panel model predicting personal accomplishment and surface acting at two time points (baseline and six months) was completely saturated (See Figure 17). Baseline personal accomplishment negatively predicted surface acting at 6 months ( $\beta=-.17$ ,  $p=.023$ ). Baseline surface acting did not negatively predict personal accomplishment at 6 months but was trending toward significance ( $\beta=-.15$ ,  $p=.058$ ). With the addition of covariates, baseline personal accomplishment still inversely predicted surface acting six months later ( $\beta=-.17$ ,  $p=.019$ ). Baseline surface acting inversely predicting personal accomplishment six months later was no longer trending significance ( $\beta=-.11$ ,  $p=.175$ ).

**12 months.** The cross-lagged panel model predicting personal accomplishment from surface acting across 12 months (Baseline, 3 months, 6 months, and 12 months) provided good fit for the data (See Figure 18; Table 6). Baseline surface acting still negatively predicted 3-month personal accomplishment ( $\beta=-.14$ ,  $p=.027$ ) and baseline personal accomplishment still negatively predicted increased surface acting at 3 months ( $\beta=-.19$ ,  $p=.001$ ). Three-month personal accomplishment also predicted six-month surface acting ( $\beta=.17$ ,  $p=.039$ ), however this relationship went in the opposite direction as hypothesized. Greater levels of personal accomplishment at three months were associated with higher levels of surface acting at 6

months. Due to the unexpectedness of this finding, another cross-lagged model was run to examine this relationship using a two-point model (see Figure 1). When a model was run predicting six-month surface acting and personal accomplishment from three-month surface acting and personal accomplishment, greater levels of personal accomplishment were no longer associated with higher levels of surface acting three months later ( $\beta = -.04$ ,  $p = .630$ ). In the twelve-month model, no other cross-lagged paths were significant. The cross-lagged panel model predicting personal accomplishment and surface acting at two time points (baseline and twelve months) was completely saturated (See Figure 19). Baseline surface acting did not significantly predict personal accomplishment at 12 months, and baseline personal accomplishment did not predict surface acting at 12 months. With the addition of important covariates, no cross-lagged paths became significant.

#### **Deep Acting predicting Emotional Exhaustion.**

**3 months.** The cross-lagged panel model predicting emotional exhaustion from deep acting across 3 months was completely saturated and therefore fit the data perfectly (See Figure 20). However, as expected no cross lagged paths were significant. With the addition of the important covariates of gender and age, no significant cross lagged paths emerged.

**6 months.** The cross-lagged panel model predicting emotional exhaustion from deep acting across 6 months (Baseline, 3 months, and 6 months) provided good fit for the data (See Figure 21; Table 6). No significant cross-lagged paths emerged. The cross-lagged panel model predicting emotional exhaustion and deep acting at two time points (baseline and six months) was completely saturated (See Figure 22). No significant cross-lagged paths emerged. With the addition of important covariates, no significant cross-lagged paths emerged.

**12 months.** The cross-lagged panel model predicting emotional exhaustion from deep acting across 12 months (Baseline, 3 months, 6 months and 12 months) provided good fit for the



data (See Figure 23; Table 6). No significant cross-lagged paths emerged. The cross-lagged panel model predicting emotional exhaustion and deep acting at two time points (baseline and 12 months) was completely saturated (See Figure 24). No significant cross-lagged paths emerged. With the addition of important covariates, no significant cross-lagged paths emerged.

#### **Deep Acting predicting Depersonalization.**

**3 months.** The cross-lagged panel model predicting depersonalization from deep acting across 3 months was completely saturated and therefore fit the data perfectly (See Figure 25). However, as expected no cross lagged paths were significant. With the addition of the important covariates of gender and age, no significant cross lagged paths emerged.

**6 months.** The cross-lagged panel model predicting depersonalization from surface acting across 6 months (Baseline, 3 months, and 6 months) provided good fit for the data (See Figure 26; Table 6). No significant cross-lagged paths emerged. The cross-lagged panel model predicting depersonalization and deep acting at two time points (baseline and six months) was completely saturated (See Figure 28). No significant cross-lagged paths emerged. With the addition of important covariates, no significant cross-lagged paths emerged.

**12 months.** The cross-lagged panel model predicting depersonalization from surface acting across 12 months (Baseline, 3 months, 6 months, and 12 months) provided good fit for the data (See Figure 27; Table 6). There were no significant cross-lagged paths. The cross-lagged panel model predicting depersonalization and deep acting at two time points (baseline and 12 months) was completely saturated (See Figure 29). There were no significant cross-lagged paths. With the addition of important covariates, no significant cross-lagged paths emerged.

#### **Deep Acting predicting Personal Accomplishment.**

**3 months.** The cross-lagged panel model predicting personal accomplishment from deep acting across 3 months was completely saturated and therefore fit the data perfectly (See Figure

30). However, contrary to hypotheses, no cross lagged paths were significant. With the addition of the important covariates of gender and age, no significant cross lagged paths emerged.

**6 months.** The cross-lagged panel model predicting reduced personal accomplishment from deep acting across 6 months (Baseline, 3 months, and 6 months) provided good fit for the data (See Figure 31; Table 6). No significant cross-lagged paths emerged. The cross-lagged panel model predicting personal accomplishment and deep acting at two time points (baseline and six months) was completely saturated (See Figure 32). There were no significant cross-lagged paths. With the addition of important covariates, no significant cross-lagged paths emerged.

**12 months.** The cross-lagged panel model predicting personal accomplishment from deep acting across 12 months (Baseline, 3 months, 6 months, and 12 months) provided good fit for the data (See Figure 33; Table 6). One significant cross-lagged path emerged, but in the opposite direction anticipated. Deep Acting at 3 months negatively predicted personal accomplishment at 6 months ( $\beta = -.15$ ,  $p = .023$ ). Greater levels of deep acting at three months were associated with lower levels of personal accomplishment at 6 months. Due to the unexpected and incongruent nature of this finding, an additional cross-lagged panel model was run predicting personal accomplishment and deep acting at six months from personal accomplishment deep acting and personal accomplishment at 3 months. No significant paths were evident in this model. Greater levels of deep acting at three month were no longer associated with higher levels of personal accomplishment at six months ( $\beta = -.07$ ,  $p = .260$ ). The cross-lagged panel model predicting personal accomplishment and surface acting at two time points (baseline and 12 months) was completely saturated (See Figure 34). There were no significant cross-lagged paths.

### **Research Question #5: Does Deep Acting Moderate the Negative Impact of Surface Acting on Burnout Cross-sectionally and Longitudinally?**

**Cross-sectionally.** In order to examine whether deep acting moderates the negative relationship between surface acting and burnout at baseline, the series of regression analyses conducted for Research Questions 1 & 2 were re-run with the interaction term of surface acting and deep acting added as a final step (after age/gender, surface acting/deep acting)(See Table 4). The interaction term was not significant in predicting emotional exhaustion ( $\beta=-.26$ ,  $p=.388$ ) or depersonalization ( $\beta=-.30$ ,  $p=.329$ ) (See Table 4). However, the interaction was significant predicting personal accomplishment at baseline ( $\beta=.73$ ,  $p=.029$ ) suggesting that deep acting moderates the relationship between surface acting and personal accomplishment. I plotted the relationship between surface acting and personal accomplishment at baseline for low (1 SD below the mean), average (the mean), and high (1 SD above the mean) levels of deep acting (See Figure 34). Surface acting was negatively associated with personal accomplishment; however, at high levels of deep acting, surface acting had less of a negative effect ( $b=-.20$ ) on personal accomplishment than at low levels of deep acting ( $b=-.38$ ). This suggests that deep acting buffers the harmful effect of surface acting on decreased personal accomplishment.

**Longitudinally.** The interaction term for baseline surface acting by deep acting did not significantly predict emotional exhaustion ( $\beta=.09$ ,  $p=.811$ ), depersonalization ( $\beta=-.19$ ,  $p=.605$ ), or personal accomplishment ( $\beta = .08$ ,  $p=.830$ ) at 3 months (See Table 5). This suggests that baseline levels of deep acting do not buffer the effect of surface acting 3 months later. Because there was no significant interaction at 3 months, I did not conduct analyses at later time points.

## DISCUSSION

This study sought to examine the impact of emotional labor on burnout in community mental health providers both cross-sectionally and longitudinally. In particular, I examined how surface acting and deep acting predict emotional exhaustion, depersonalization, and decreased personal accomplishment at baseline and over time. I also examined whether deep acting has a buffering effect on the harmful outcomes of surface acting when both strategies are used together cross sectionally and over time. The current study is the first time emotional labor has been studied cross-sectionally and longitudinally in community mental health providers.

### Surface Acting and Burnout

As predicted, surface acting was a significant predictor of all dimensions of burnout (emotional exhaustion, depersonalization, reduced personal accomplishment) cross-sectionally. Although the current sample generally “disagreed” that they engaged in surface acting (i.e., mean levels of surface acting were low), surface acting was significantly associated with increased emotional exhaustion, increased depersonalization, and decreased personal accomplishment. Because mental health providers have significant emotional demands (Sjølie et al., 2017) and are at an increased risk of burnout, understanding ways that providers manage their emotions and the consequences those have on well-being is important (Rupert & Morgan, 2005). These correlations were similar in direction and magnitude to previously found relationships between surface acting and increased emotional exhaustion (our sample  $r=.54$  vs.  $r=.37$ ) and depersonalization (our sample  $r=.49$  vs.  $r=.35$ ) in other service and helping professions (e.g. call center employees, teacher, childcare workers; Hulsheger & Schewe, 2011). However, in our sample, there was a stronger negative relationship between surface acting and personal accomplishment (our sample  $r=-.35$  vs.  $r=-.072$ ) than was found in the meta-analysis conducted

by Hulsheger and Schewe (2011). These results may reflect the greater importance of authenticity (as opposed to surface acting) in mental health services than in other service positions (Rogers, 1942; Shattell, Starr, & Thomas, 2007). However, results are preliminary and speculative at best. More research is needed to further examine this relationship. These findings do however demonstrate that surface acting is associated with similar well-being outcomes for mental health providers as other professions (Hulsheger & Schewe, 2011).

This study also expanded prior work by examining longitudinal relationships, which are important for understanding directionality in the relationships. I hypothesized that surface acting would have negative consequences on work-related well-being over time. However, my analyses suggest more nuanced findings, namely that there may be no long-term impact of surface acting on emotional exhaustion, a reverse directional relationship with depersonalization, and a bidirectional relationship with personal accomplishment. Each of these findings will be discussed in turn.

**Emotional Exhaustion.** While surface acting predicted emotional exhaustion cross sectionally, surface acting did not predict emotional exhaustion at three months as hypothesized. Therefore, people who are emotionally exhausted may be engaging in surface acting at higher levels, but surface acting may not necessarily have long term consequences on emotional exhaustion. One explanation for this relationship may be a third variable that is underlying both. Surface acting has been described as a “response-focused” emotional regulation strategy (Grandey, 2000) and there is evidence that people engage in surface acting more frequently when they are stressed, and deep acting when they are not stressed (Grandey, 2003). Because stress is associated with higher levels of emotional exhaustion (Grandey, 2003), it may be that the correlation between surface acting and emotional exhaustion is the result of high stress levels driving up both variables. Therefore, people who are under stress may be engaging in surface

acting and feeling emotionally exhausted simultaneously, but a lack of longitudinal relationship suggests that surface acting is not depleting emotional resources in the long-term as hypothesized.

It is also possible that surface acting and emotional exhaustion have a longitudinal relationship, but over a shorter time period than 3 months. While Cote and Morgan (2002) found that student workers with high levels of emotional labor were less likely to be satisfied with their job four weeks later, Uy, Lin, and Ilies (2017) found that even one incidence of “feeling helpful” can buffer the longitudinal impact of surface acting on emotional exhaustion for call center employees. Given how much circumstances can change for a community mental health provider over a three month interval (e.g. caseloads, turnover of management and coworkers; Beidas et al., 2016), important variables may reset this cycle (i.e. simultaneously reduce levels of emotional labor and burnout) but were not measured in the current study. It is possible that surface acting may impact feelings of exhaustion, but three months is too long of a time frame to capture this relationship.

Another potential reason why surface acting did not predict emotional exhaustion longitudinally may have to do with the nature of the work. I had hypothesized a longitudinal relationship with emotional exhaustion based on research that suggested that customers are able to read the inauthenticity of surface acting, and therefore become more angry and aggressive in the interaction, resulting in more hostile interactions and increased emotional exhaustion overtime (Zhan et al., 2016). However, the ability to sense surface acting by a customer requires complex social skills including perceptiveness, perspective taking, and ability to understand that someone’s internal state can be different than their external facial display. People with mental illness often struggle with social skills and perspective taking (Green, Horan, & Lee, 2015). Due to these deficits, the customers (or clients) for mental health providers may be less able to sense

whether a provider is being authentic or inauthentic in the interaction, and so, surface acting may not have a similar impact on clients in these settings. That is, providers who engage in surface acting may not elicit more negativity from the client, hence not increase levels of exhaustion in the provider. One interesting path for future research could be to better understand how surface acting may be perceived by clients in a mental health setting.

**Depersonalization.** Contrary to hypotheses, surface acting did not predict depersonalization at three months. However, the model suggests that depersonalization may lead to later surface acting at three and six months later. Because recovery for people with severe mental illness is a slow process that involves a number of small steps towards a greater sense of agency and participation in everyday life (Drake & Whitley, 2014), providers may not recognize these small steps and feel discouraged and cynical about their client's ability to improve. Overtime, providers may develop lowered morale and begin "faking" emotions (i.e. positivity, enthusiasm) or use *surface acting* to cover up feelings of cynicism due to initially holding unrealistic goals (Kestnbaum, 1984). Surface acting has been associated with covering up negative emotions such as anger and frustration (Lee et al., 2016); therefore, surface acting may be used more often to cover negative feelings more similar to anger and frustration (i.e. cynicism) towards clients, than feelings of exhaustion. Consequently, higher levels of depersonalization and cynicism (negative attitudes) may lead to an increased need to "fake" positive emotions to function effectively at work. Future studies may want to examine whether client progress is directly related to levels of surface acting within interactions between mental health providers and specific clients.

**Personal Accomplishment.** I found significant bidirectional cross lagged paths between surface acting and personal accomplishment: Increased surface acting at baseline significantly predicted decreased personal accomplishment at three months, and lower levels of baseline

personal accomplishment significantly predicted increased surface acting at three months. In addition, I found this decreased personal accomplishment at baseline had negative consequences for surface acting six months later. The more an individual identifies with a role and feels effective, the less need there is for fake emotions (Heise, 1977); therefore, increased surface acting at baseline may be an indicator that the provider does not identify with the role or feel personal accomplishment from performing the job. Although people with serious mental illness do have more difficulty with emotion perception and perspective taking (Green et al., 2015), those with serious mental illness have described difficulties relating to mental health providers that they view as detached (Eriksen et al., 2014), which may impact the quality of the relationship. An inauthentic provider may be perceived as lacking in caring, which could affect the relationship. In addition, employees who have more negative affect overall, are more likely to report suppressing and faking emotions (e.g. surface acting) (Goldberg & Grandey, 2007). Those who feel ineffective in their jobs may be frustrated more often and experience negative affect more frequently, resulting in higher levels of surface acting to cover up this negative affect (Lee et al., 2016). And those who continue to stay at a job where they feel ineffective and a lack of personal accomplishment, may need to cover up those feelings in order to function and keep their job.

At the same time, there is evidence that this is a bidirectional relationship as well. Although there are not as strong long-term consequences, surface acting at baseline predicted decreased personal accomplishment three months later. It may be that a mental health provider who is inauthentic may perceive him or herself to be less effective. Drawing on cognitive dissonance theory, or the way people make sense of their behavior, inauthentic providers may feel internal tension due to their inauthentic behavior while being in a human service job, and therefore conclude they must not be good at the job (Aronson, 1999; Harmon-Jones & Mills, 1999). In addition, this lack of authentic interaction may impact feelings of connection and alliance



between the client and provider, even if the client does not possess the social cognition to perceive the inauthenticity. There is evidence that therapeutic alliance is important for client outcomes in community mental health (e.g. Goldsmith, Lewis, Dunn, & Bentall, 2015; Howgego, Yellowlees, Owen, Meldrum, & Dark, 2003; Melau et al., 2015). Therefore, the negative impact that surface acting has on the therapeutic alliance and relationship with the consumer, may result in poorer outcomes.

### **Deep Acting and Burnout**

I had hypothesized that deep acting would be associated with increased personal accomplishment, but not other domains of burnout. However, deep acting was not related to *any* of the domains of burnout cross-sectionally or longitudinally. Prior research has shown mixed findings with regard to deep acting and burnout. Hülshager, Lang, and Maier (2010) found that deep acting resulted in increased job performance two months later for trainee teachers, while others have found no association between deep acting and indications of enhanced occupational wellbeing (Uy et al., 2017). The lack of relationship in my study could also reflect the complex relationship between deep acting and well-being. Although deep acting is considered less cognitively and emotionally demanding than surface acting (Goldberg & Grandey, 2007; Ma & Huang, 2006), it is still effortful emotional regulation (Beal & Trougakos, 2013; Goodwin, Groth, & Frenkel, 2011) and therefore deep acting is argued to both deplete resources through emotion regulation and simultaneously increase resources by resulting in more rewarding interactions with customers (Groth et al., 2009). Therefore, it is possible that deep acting has no net effect on burnout (i.e., the positive and negative impacts “cancel” each other out). Although a lack of relationship between deep acting and personal accomplishment was not consistent with my hypothesis, this finding is consistent with literature suggesting that deep acting may result in no net gain or loss (Grandey, 2003; Hülshager et al., 2010; Martínez-Iñigo et al., 2007).

In spite of this, Hulsheger and Schewe (2011) found that deep acting was slightly associated with personal accomplishment in service and some helping professions. This relationship is theorized to be a result of better-quality interactions with customers, which in turn results in higher levels of personal accomplishment. However, these positive interactions with clients may have different implications for feelings of personal accomplishment for those in mental health providers than for service workers. In service positions, customer satisfaction is often the metric that is used to judge performance or accomplishment; however, external metrics used to judge the performance of mental health providers can range from the quality of interactions with clients, to knowledge of connecting services and resources, decision making skills and clinical judgement (Bashook, 2005). Unlike customer service providers, mental health providers may judge their personal accomplishment less on how their clients perceive and like them, and more on how effectively they are able to improve the mental health and life circumstances of their clients. Therefore, even if deep acting is resulting in better interactions with clients, that might not meaningfully increase self-reported personal accomplishment as it might with a customer service representative.

### **Does Deep Acting Buffer the Impact of Surface Acting on Burnout?**

Largely unsupported, moderation only appeared to be present for the relationship with personal accomplishment and only for the cross-sectional relationship. Higher levels of surface acting were associated with lower levels of personal accomplishment, but higher levels of deep acting weakened this relationship. This relationship has not previously been found, however it follows a similar pattern described by Gabriel et al. (2015) who used latent profile analysis to examine the impact of engaging in various levels of deep acting and surface acting on emotional exhaustion and job satisfaction. Although personal accomplishment was not included in their original model, Gabriel et al. (2015) found that high surface acting when paired with high deep

acting was associated with greater work-related wellbeing than high surface acting with low levels of deep acting, suggesting deep acting may buffer the impacts of surface acting in some work-related domains. This may imply that authenticity is important for feelings of effectiveness in human service work and could be fruitful for future research.

### **Limitations**

There are several limitations to the current study that are worth mentioning. First, the participants were in a randomized control trial to test the effectiveness of an intervention dedicated to reducing burnout. Although we determined there was no significant impact of the intervention on burnout or emotional labor levels across the 12-month intervention, the fact that participants were taking part in a study focused on burnout make them different from other community mental health workers. Additionally, the current sample was overwhelmingly female (80%). While it is typical for female clinicians to far exceed male clinicians working in community mental health positions (e.g. Salyers et al., 2015; Rossi et al., 2012; Acker, 2009), gender is also an important predictor of burnout (Purvanova & Muros, 2010). Although I controlled for gender in my analyses, I was underpowered to detect gender differences. Therefore, the results found in this study may be unique to this population and these findings may not apply to the relationship between emotional labor and burnout in other settings or with predominantly male samples.

An important limitation is that some of the cross-lagged panel models used in the current analyses may have been underpowered to detect effects. Structural Equation modeling requires 10 subjects for every parameter estimated (Bentler & Chou, 1987). Although the 6-month cross-lagged panel models were adequately powered (14.68 participants for every parameter), the 12-month cross-lagged panel models had <10 participants (9.65) for every estimated path, which is on the low end of power.

Another limitation is related to the emotional labor scale. The emotional labor scale asks what participants “generally do”. Because this requires recalling information about previous emotions, responses may not be as accurate as if emotional labor was measured by random sampling with different clients throughout a given day. In addition to issues with recall, it is possible that participants responding how they generally deal with consumers may be primed based on a recent interaction. Future directions could measure emotional labor of mental health workers in a real-time sampling approach and link it more proximally with burnout.

Another limitation of the current study was that we did not ask the participants to specify what emotion they are most often managing or information about the specific display rules of their organization. Therefore, we are unable to decipher from the current data whether people are attempting to manage their sad emotions, frustrated emotions, or even positive ones. Because positive emotions are easier and less effortful to regulate than negative ones, this difference may have implications for burnout, particularly emotional exhaustion (Nezlek & Kuppens, 2008). Future studies should include questions regarding what emotion they are most often managing in their current position.

An additional limitation of the current study is the inability to control for individual personality variables, specifically dispositional negative affectivity. This is a well-established covariate related to emotional labor (Abraham, 1999; Grandey, 2000; Morris & Feldman, 1996) and has also been associated with burnout and worker well-being (Kahn, Schneider, Jenkins-Henkelman, & Moyle, 2006; Roberts & Zigarmi, 2014). Because we did not measure this variable in the parent study, we were unable to control for it in the current study.

Overall reports of surface acting were low and deep acting was high. Although there has been limited research examining levels of emotional labor in mental health settings (Mann & Cowburn, 2005), levels were lower expected given previous research in helping professions

(Hulsheger & Schewe, 2011). In addition, burnout levels were low. We found low levels of depersonalization and high levels of personal accomplishment, therefore it may be that little surface acting is needed in mental health work (or in this sample of mental health workers at least). Alternatively, there is some social desirability that is inherent with self-reported emotion management in mental health providers (Wallbott & Scherer, 1989). Because the job primarily involves caring for others, endorsing items that may suggest you *pretend* to care, may result in shame and therefore people report using these strategies at lower rates than they really do. Although this is likely not as taboo of a topic for a customer service provider, more research should examine how well emotional labor constructs apply to the mental health provider population. Regardless of the source of the lower prevalence of surface acting, the restricted range may have impaired our ability to detect relationships if they do exist.

## Conclusion

Although the relationship between emotional labor and burnout has been well established in the literature (e.g. Hülsheger, & Schewe, 2011; Brotheridge, & Grandey, 2002; Zapf et al., 2001), this is the first study to demonstrate this relationship in community mental health providers. Cross sectional surface acting was associated with all three dimensions of burnout, while deep acting was not. Contrary to hypotheses, surface acting did not result in long term negative consequences. While only surface acting led to decreased levels of personal accomplishment at three months, both increased depersonalization and decreased personal accomplishment led to higher levels of surface acting three months and six months later. Therefore, dimensions of burnout may be resulting in higher levels of surface acting rather than the other way around. Surface acting may be used as a means of coping with burnout. In order to investigate these questions, more qualitative research may be needed to understand how providers manage their emotions and why, going beyond answering “agree” or “disagree” on Likert scale of whether they globally manage their emotions. It may be an interesting path of research to investigate more nuanced relationships, for example, how many clients the provider feels they need to manage their emotions with, and whether there are any clients with whom the provider feels s/he can be authentic. Regardless, the current research demonstrates that if providers are surface acting as a way to cope with feelings of burnout (depersonalization and reduced personal accomplishment), that it is not an effective approach and may even result in decreased feelings of personal accomplishment at work. Due to how problematic burnout is for community mental health providers and a current lack of effective interventions to prevent burnout (Dreison et al., 2018), more research is needed on how providers manage their emotions and how this can be done in more beneficial ways.

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## TABLES

Table 1

*Baseline and Demographic Correlations*

|                                   | M     | SD   | 1      | 2      | 3      | 4     | 5     | 6     | 7      | 8     | 9     | 10    | 11    | 12   | 13    | 14    |
|-----------------------------------|-------|------|--------|--------|--------|-------|-------|-------|--------|-------|-------|-------|-------|------|-------|-------|
| 1. Emotional Exhaustion (BL)      | 2.47  | 1.35 | 1      |        |        |       |       |       |        |       |       |       |       |      |       |       |
| 2. Depersonalization (BL)         | 1.26  | 1.05 | .56**  | 1      |        |       |       |       |        |       |       |       |       |      |       |       |
| 3. Personal Accomplishment (BL)   | 4.85  | 0.75 | -.29** | -.31** | 1      |       |       |       |        |       |       |       |       |      |       |       |
| 4. Surface Acting (BL)            | 2.20  | 0.83 | .54**  | .49**  | -.35** | 1     |       |       |        |       |       |       |       |      |       |       |
| 5. Deep Acting (BL)               | 3.26  | 0.87 | .09    | .20**  | .00    | .20** | 1     |       |        |       |       |       |       |      |       |       |
| 6. White                          | 85%   | -    | .31**  | .27**  | .10    | .18*  | .06   | 1     |        |       |       |       |       |      |       |       |
| 7. Graduate degree                | 40%   | -    | .07    | .10    | .06    | .01   | -.02  | -.01  | 1      |       |       |       |       |      |       |       |
| 8. Married                        | 54%   | -    | -.05   | -.05   | .11    | -.15* | -.02  | .16*  | -.13   | 1     |       |       |       |      |       |       |
| 9. Supervisor                     | 17%   | -    | .11    | .17*   | .06    | .06   | -.06  | .19** | .13    | .17*  | 1     |       |       |      |       |       |
| 10. Gender (Female)               | 80%   | -    | .18*   | .04    | -.17*  | .14   | -.01  | .11   | .06    | -.04  | -.01  | 1     |       |      |       |       |
| 11. No. of Children               | 0.86  | 1.12 | -.21** | -.07   | .00    | -.09  | -.03  | .01   | -.23** | .30** | .09   | .05   | 1     |      |       |       |
| 12. Children under 5              | 0.20  | 0.49 | -.03   | -.01   | .07    | .11   | .03   | .02   | -.04   | .18*  | .02   | -.05  | .42** | 1    |       |       |
| 13. Length Current position (yrs) | 3.28  | 4.67 | .07    | .03    | .00    | .01   | .00   | .05   | .10    | .15*  | .23** | -.15* | -.06  | -.14 | 1     |       |
| 14. Length Mental health (yrs)    | 8.89  | 8.97 | -.03   | -.07   | .05    | -.05  | -.14* | .00   | .28**  | .12   | .32** | -.16* | -.07  | -.08 | .56** | 1     |
| 15. Hours worked                  | 41.68 | 6.78 | .16*   | .19**  | -.06   | .16*  | -.02  | .12   | .01    | .06   | .21** | -.08  | -.06  | -.03 | .05   | .11   |
| 16. Hours overtime                | 2.90  | 4.92 | .20**  | .19**  | -.09   | .11   | -.14* | .04   | .04    | -.02  | .24** | -.05  | -.15* | -.10 | .09   | .20** |

Note. N=193. M=Mean, SD= Standard Deviation, BL= Baseline; yrs= Years. \*p<.05, \*\*p<.01

Table 2

*Correlations between Emotional Labor and Burnout at Baseline, 3 months, 6 months, and 12 months*

|            | M    | SD   | 1      | 2      | 3      | 4      | 5     | 6      | 7      | 8      | 9      | 10    | 11     | 12     | 13     | 14     | 15    | 16     | 17     | 18     | 19   |
|------------|------|------|--------|--------|--------|--------|-------|--------|--------|--------|--------|-------|--------|--------|--------|--------|-------|--------|--------|--------|------|
| 1.EE-BL    | 2.47 | 1.35 | 1      |        |        |        |       |        |        |        |        |       |        |        |        |        |       |        |        |        |      |
| 2.DEP-BL   | 1.26 | 1.05 | .56**  | 1      |        |        |       |        |        |        |        |       |        |        |        |        |       |        |        |        |      |
| 3.PA-BL    | 4.85 | 0.75 | -.30** | -.31** | 1      |        |       |        |        |        |        |       |        |        |        |        |       |        |        |        |      |
| 4.SA-BL    | 2.20 | 0.83 | .54**  | .49**  | -.35** | 1      |       |        |        |        |        |       |        |        |        |        |       |        |        |        |      |
| 5.DA-BL    | 3.26 | 0.87 | .09    | .20**  | .00    | .20**  | 1     |        |        |        |        |       |        |        |        |        |       |        |        |        |      |
| 6.EE-3M    | 2.49 | 1.30 | .73**  | .44**  | -.26** | .39**  | .10   | 1      |        |        |        |       |        |        |        |        |       |        |        |        |      |
| 7.DEP-3M   | 1.19 | 0.96 | .42**  | .71**  | -.21*  | .38**  | .14   | .58**  | 1      |        |        |       |        |        |        |        |       |        |        |        |      |
| 8.PA-3M    | 4.90 | 0.69 | -.33** | -.25** | .51**  | -.35** | -.13  | -.37** | -.26** | 1      |        |       |        |        |        |        |       |        |        |        |      |
| 9.SA-3M    | 2.23 | 0.88 | .37**  | .42**  | -.37** | .65**  | .21** | .49**  | .49**  | -.44** | 1      |       |        |        |        |        |       |        |        |        |      |
| 10.DA-3M   | 3.23 | 0.86 | .02    | .11    | -.05   | .21**  | .46** | .03    | .09    | .08    | .22**  | 1     |        |        |        |        |       |        |        |        |      |
| 11.EE-6M   | 2.47 | 1.38 | .62**  | .35**  | -.26** | .40**  | .04   | .83**  | .46**  | -.38** | .47**  | .09   | 1      |        |        |        |       |        |        |        |      |
| 12.DEP-6M  | 1.21 | 1.09 | .38**  | .64**  | -.29** | .40**  | .12   | .50**  | .69**  | -.31** | .48**  | .18*  | .59**  | 1      |        |        |       |        |        |        |      |
| 13.PA-6M   | 4.90 | 0.77 | -.30** | -.28** | .57**  | -.36** | -.15  | -.33** | -.30** | .64**  | -.45** | -.03  | -.27** | -.30** | 1      |        |       |        |        |        |      |
| 14.SA-6M   | 2.15 | 0.93 | .38**  | .47**  | -.41** | .66**  | .16   | .43**  | .50**  | -.32** | .71**  | .21*  | .51**  | .53**  | -.41** | 1      |       |        |        |        |      |
| 15.DA-6M   | 3.18 | 0.96 | .04    | .14    | -.14   | .22**  | .27** | .09    | .06    | -.05   | .18*   | .44** | .15    | .05    | -.03   | .20*   | 1     |        |        |        |      |
| 16.EE-12M  | 2.41 | 1.24 | .52**  | .36**  | -.19*  | .28**  | .04   | .68**  | .45**  | -.24** | .38**  | .12   | .72**  | .50**  | -.37** | .44**  | .13   | 1      |        |        |      |
| 17.DEP-12M | 1.13 | 1.00 | .29**  | .63**  | -.23*  | .26**  | -.01  | .45**  | .68**  | -.16   | .34**  | .15   | .41**  | .67**  | -.23*  | .42**  | -.03  | .58**  | 1      |        |      |
| 18.PA-12M  | 4.83 | 0.81 | -.10   | -.16   | .49**  | -.13   | -.21* | -.26** | -.08   | .50**  | -.36** | -.22* | -.20*  | -.18   | .57**  | -.25** | .03   | -.41** | -.27** | 1      |      |
| 19.SA-12M  | 2.17 | 0.90 | .21*   | .37**  | -.28** | .58**  | .07   | .33**  | .38**  | -.24*  | .69**  | .20*  | .36**  | .39**  | -.30** | .74**  | .07   | .41**  | .38**  | -.36** | 1    |
| 20.DA-12M  | 3.11 | 0.94 | .09    | .09    | -.10   | .29**  | .38** | .12    | .15    | .05    | .24**  | .62** | .20*   | .10    | -.01   | .26**  | .54** | .13    | .03    | -.13   | .23* |

Note. M= Mean; SD= Standard Deviation; EE= Emotional Labor; DEP= Depersonalization; PA= Personal Accomplishment; BL= Baseline; 3M= 3months; 6M= 6 months; 12M=12 months. \*p<.05, \*\*p<.01.

Table 3

*Hierarchical Regression Analyses Predicting Baseline Burnout from Surface Acting and Deep Acting*

|        |                   | BL Emotional Exhaustion    |     |         |                         |            |          |
|--------|-------------------|----------------------------|-----|---------|-------------------------|------------|----------|
|        |                   | B                          | SE  | $\beta$ | R <sup>2</sup> $\Delta$ | F $\Delta$ | <i>p</i> |
| Step 1 |                   |                            |     |         | .03                     | 3.28*      | .040     |
|        | Age               | .00                        | .01 | .00     |                         |            | .956     |
|        | Gender (Female)   | .61                        | .24 | .18*    |                         |            | .012     |
| Step 2 |                   |                            |     |         | .27                     | 36.32**    | .040     |
|        | Age               | .01                        | .01 | .08     |                         |            | .229     |
|        | Gender (Female)   | .40                        | .21 | .12     |                         |            | .054     |
|        | BL Surface Acting | .87                        | .10 | .53**   |                         |            | .000     |
|        | BL Deep Acting    | .01                        | .10 | .01     |                         |            | .934     |
|        |                   | BL Depersonalization       |     |         |                         |            |          |
|        |                   | B                          | SE  | $\beta$ | R <sup>2</sup> $\Delta$ | F $\Delta$ | <i>p</i> |
| Step 1 |                   |                            |     |         | .05                     | 5.41**     | .005     |
|        | Age               | -.02                       | .01 | -.23**  |                         |            | .001     |
|        | Gender (Female)   | .02                        | .19 | .01     |                         |            | .931     |
| Step 2 |                   |                            |     |         | .22                     | 28.02**    | .000     |
|        | Age               | -.01                       | .01 | -.15*   |                         |            | .023     |
|        | Gender (Female)   | -.12                       | .17 | -.04    |                         |            | .487     |
|        | BL Surface Acting | .58                        | .08 | .46**   |                         |            | .000     |
|        | BL Deep Acting    | .10                        | .08 | .08     |                         |            | .222     |
|        |                   | BL Personal Accomplishment |     |         |                         |            |          |
|        |                   | B                          | SE  | $\beta$ | R <sup>2</sup> $\Delta$ | F $\Delta$ | <i>p</i> |
| Step 1 |                   |                            |     |         | .03                     | 3.19*      | .043     |
|        | Age               | .00                        | .00 | .06     |                         |            | .404     |
|        | Gender (Female)   | -.30                       | .14 | -.16*   |                         |            | .026     |
| Step 2 |                   |                            |     |         | .11                     | 12.06**    | .000     |
|        | Age               | .00                        | .00 | .02     |                         |            | .404     |
|        | Gender (Female)   | -.22                       | .14 | -.12    |                         |            | .086     |
|        | BL Surface Acting | -.31                       | .06 | -.35**  |                         |            | .000     |
|        | BL Deep Acting    | .06                        | .06 | .07     |                         |            | .349     |

Note. N=193. B= unstandardized coefficient, SE= Standard Error,  $\beta$ =standardized coefficient, BL= Baseline.  
\**p*<.05, \*\**p*<.01

Table 4

*Predicting Baseline Burnout from the Interaction between Surface Acting and Deep Acting*

|        |                                 | BL Emotional Exhaustion    |     |         |                         |            |          |
|--------|---------------------------------|----------------------------|-----|---------|-------------------------|------------|----------|
|        |                                 | B                          | SE  | $\beta$ | R <sup>2</sup> $\Delta$ | F $\Delta$ | <i>p</i> |
| Step 1 |                                 |                            |     |         | .03                     | 3.28*      | .040     |
|        | Age                             | .00                        | .01 | .00     |                         |            | .956     |
|        | Gender (Female)                 | .61                        | .24 | .18*    |                         |            | .012     |
| Step 2 |                                 |                            |     |         | .27                     | 24.43**    | .000     |
|        | Age                             | .01                        | .01 | .08     |                         |            | .265     |
|        | Gender (Female)                 | .40                        | .21 | .12     |                         |            | .060     |
|        | BL Surface Acting               | 1.19                       | .39 | .73**   |                         |            | .003     |
|        | BL Deep Acting                  | .20                        | .24 | .13     |                         |            | .411     |
|        | BL Surface Acting x Deep Acting | -.10                       | .11 | -.26    |                         |            | .388     |
|        |                                 | BL Depersonalization       |     |         |                         |            |          |
|        |                                 | B                          | SE  | $\beta$ | R <sup>2</sup> $\Delta$ | F $\Delta$ | <i>p</i> |
| Step 1 |                                 |                            |     |         | .05                     | 5.41**     | .005     |
|        | Age                             | -.02                       | .01 | -.23**  |                         |            | .001     |
|        | Gender (Female)                 | .02                        | .19 | .01     |                         |            | .931     |
| Step 2 |                                 |                            |     |         | .22                     | 19.00**    | .000     |
|        | Age                             | -.01                       | .01 | -.15*   |                         |            | .018     |
|        | Gender (Female)                 | -.12                       | .17 | -.04    |                         |            | .460     |
|        | BL Surface Acting               | .87                        | .31 | .69**   |                         |            | .006     |
|        | BL Deep Acting                  | .27                        | .19 | .22     |                         |            | .165     |
|        | BL Surface Acting x Deep Acting | -.09                       | .09 | -.30    |                         |            | .329     |
|        |                                 | BL Personal Accomplishment |     |         |                         |            |          |
|        |                                 | B                          | SE  | $\beta$ | R <sup>2</sup> $\Delta$ | F $\Delta$ | <i>p</i> |
| Step 1 |                                 |                            |     |         | .03                     | 3.19*      | .043     |
|        | Age                             | .00                        | .00 | .06     |                         |            | .404     |
|        | Gender (Female)                 | -.30                       | .14 | -.16*   |                         |            | .026     |
| Step 2 |                                 |                            |     |         | .13                     | 9.82**     | .000     |
|        | Age                             | .00                        | .00 | .04     |                         |            | .606     |
|        | Gender (Female)                 | -.21                       | .13 | -.11    |                         |            | .103     |
|        | BL Surface Acting               | -.82                       | .24 | -.91**  |                         |            | .001     |
|        | BL Deep Acting                  | -.24                       | .15 | -.28    |                         |            | .106     |
|        | BL Surface Acting x Deep Acting | .15                        | .07 | .73*    |                         |            | .029     |

Note. *N*=193. B= unstandardized coefficient, SE= Standard Error,  $\beta$ =standardized coefficient, BL= Baseline, \**p*<.05, \*\**p*<.01.

Table 5

*Predicting Longitudinal Burnout: The Interaction of Surface Acting and Deep Acting at Baseline*

|                                 |      | 3 Month Emotional Exhaustion    |         |                         |            |          |
|---------------------------------|------|---------------------------------|---------|-------------------------|------------|----------|
|                                 | B    | SE                              | $\beta$ | R <sup>2</sup> $\Delta$ | F $\Delta$ | <i>p</i> |
| Step 1                          |      |                                 |         | .05                     | 4.11*      | .018     |
| Age                             | -.02 | .01                             | -.21*   |                         |            | .012     |
| Gender (Female)                 | .27  | .27                             | .07     |                         |            | .410     |
| Step 2                          |      |                                 |         | .12                     | 7.17*      | .000     |
| Age                             | -.01 | .01                             | -.12    |                         |            | .135     |
| Gender (Female)                 | .26  | .26                             | .08     |                         |            | .324     |
| BL Surface Acting               | .48  | .49                             | .29     |                         |            | .334     |
| BL Deep Acting                  | -.07 | .29                             | -.05    |                         |            | .809     |
| BL Surface Acting x Deep Acting | .03  | .14                             | .09     |                         |            | .811     |
|                                 |      | 3 Month Depersonalization       |         |                         |            |          |
|                                 | B    | SE                              | $\beta$ | R <sup>2</sup> $\Delta$ | F $\Delta$ | <i>p</i> |
| Step 1                          |      |                                 |         | .10                     | 8.75**     | .000     |
| Age                             | -.03 | .01                             | -.33**  |                         |            | .000     |
| Gender (Female)                 | -.24 | .20                             | -.10    |                         |            | .214     |
| Step 2                          |      |                                 |         | .10                     | 6.40**     | .000     |
| Age                             | -.02 | .01                             | -.25**  |                         |            | .002     |
| Gender (Female)                 | -.22 | .19                             | -.09    |                         |            | .231     |
| BL Surface Acting               | .57  | .35                             | .47     |                         |            | .107     |
| BL Deep Acting                  | .10  | .21                             | .10     |                         |            | .620     |
| BL Surface Acting x Deep Acting | -.05 | .10                             | -.19    |                         |            | .605     |
|                                 |      | 3 Month Personal Accomplishment |         |                         |            |          |
|                                 | B    | SE                              | $\beta$ | R <sup>2</sup> $\Delta$ | F $\Delta$ | <i>p</i> |
| Step 1                          |      |                                 |         | .03                     | 2.18       | .117     |
| Age                             | .00  | .00                             | .04     |                         |            | .593     |
| Gender (Female)                 | -.28 | .15                             | -.15    |                         |            | .063     |
| Step 2                          |      |                                 |         | .12                     | 7.20**     | .000     |
| Age                             | .00  | .01                             | -.05    |                         |            | .512     |
| Gender (Female)                 | -.30 | .14                             | -.17*   |                         |            | .033     |
| BL Surface Acting               | .36  | .26                             | -.41    |                         |            | .179     |
| BL Deep Acting                  | -.08 | .16                             | -.10    |                         |            | .607     |
| BL Surface Acting x Deep Acting | .02  | .07                             | .08     |                         |            | .830     |

Note. N= 154. B= unstandardized coefficient, SE= Standard Error,  $\beta$ =standardized coefficient, BL= Baseline, \**p*<.05, \*\**p*<.01

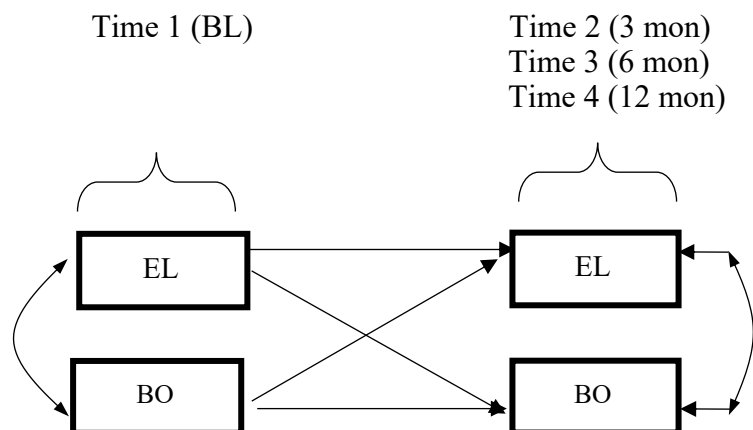
Table 6

*Model Indices of Fit for Cross-Lagged Panel Models*

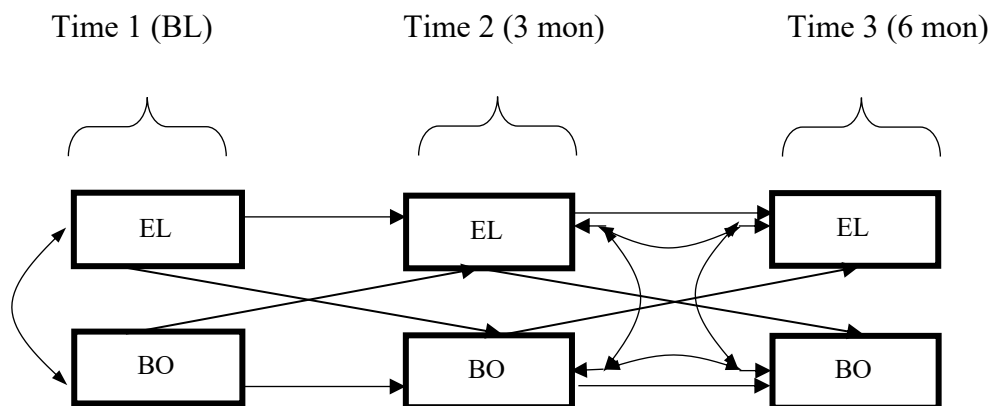
| Figure # | Model Description | <i>df</i> | $\chi^2$ value | <i>p</i> | <i>RMSEA</i> | <i>CFI</i> | <i>TLI</i> | <i>SRMR</i> |
|----------|-------------------|-----------|----------------|----------|--------------|------------|------------|-------------|
| 6        | SA & EE - 6       | 2         | 0.270          | 0.874    | 0.000        | 1.000      | 1.023      | 0.004       |
| 8        | SA & EE - 12      | 8         | 4.242          | 0.835    | 0.000        | 1.000      | 1.017      | 0.011       |
| 11       | SA & DEP - 6      | 2         | 0.492          | 0.782    | 0.000        | 1.000      | 1.024      | 0.005       |
| 13       | SA & DEP - 12     | 8         | 6.580          | 0.583    | 0.000        | 1.000      | 1.007      | 0.014       |
| 16       | SA & PA - 6       | 2         | 0.665          | 0.717    | 0.000        | 1.000      | 1.026      | 0.007       |
| 18       | SA & PA - 12      | 8         | 9.833          | 0.277    | 0.034        | 0.997      | 0.989      | 0.027       |
| 21       | DA & EE- 6        | 2         | 0.814          | 0.666    | 0.000        | 1.000      | 1.024      | 0.011       |
| 23       | DA & EE - 12      | 8         | 6.710          | 0.568    | 0.000        | 1.000      | 1.009      | 0.020       |
| 26       | DA & DEP- 6       | 2         | 0.542          | 0.763    | 0.000        | 1.000      | 1.038      | 0.008       |
| 28       | DA & DEP- 12      | 8         | 9.598          | 0.294    | 0.032        | 0.996      | 0.988      | 0.023       |
| 31       | DA & PA - 6       | 2         | 0.978          | .613     | .000         | 1.00       | 1.035      | 0.011       |
| 33       | DA & PA- 12       | 8         | 11.929         | .154     | .050         | 0.989      | 0.961      | 0.035       |

*Note.* *N*=193. SA= Surface Acting; DA= Deep Acting; EE= Emotional Exhaustion; DEP= Depersonalization; PA= Personal Accomplishment. 6= 6-month cross-lagged model; 12= 12-month cross-lagged model. *df*= Degrees of Freedom;  $\chi^2$ = Chi-square, *p*= p-value of Chi-square test, *RMSEA*= Root Mean Square Error of Approximation, *CFI*= Comparative Fit Index, *TLI*= Tucker Lewis Index, *SRMR*= Standardized Root Mean Square Residual.

## FIGURES

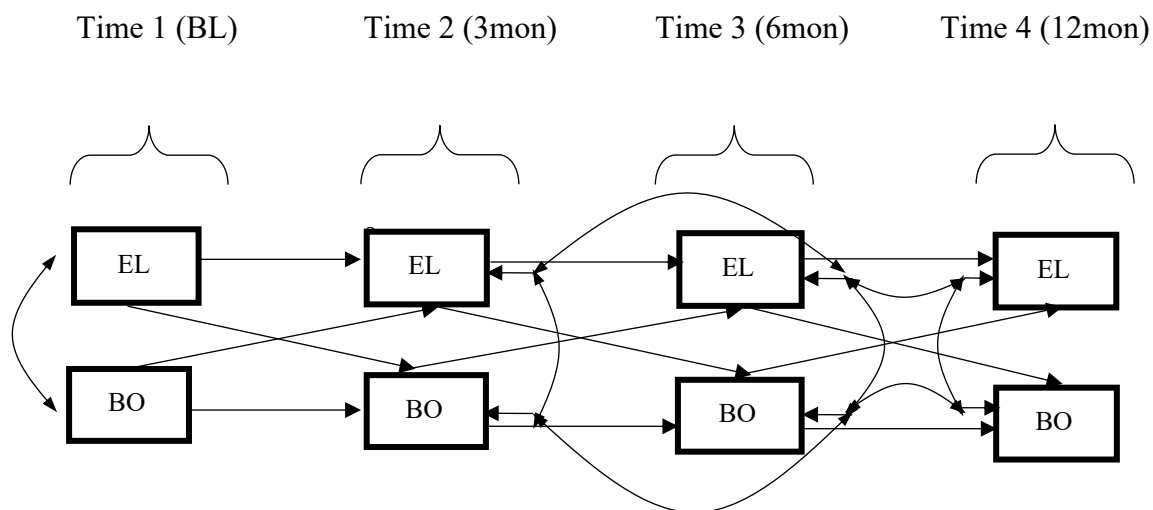


*Figure 1.* Cross-lagged path model with Time 1 (Baseline) Emotional Labor and Burnout predicting later time point (i.e. 3mon, 6 mon or 12 mon) Emotional Labor and Burnout. *Note:* EL= Emotional Labor. BO= Burnout. BL= Baseline. 3 mon= 3 Months; 6 mon= 6 months; 12 mon= 12 months.

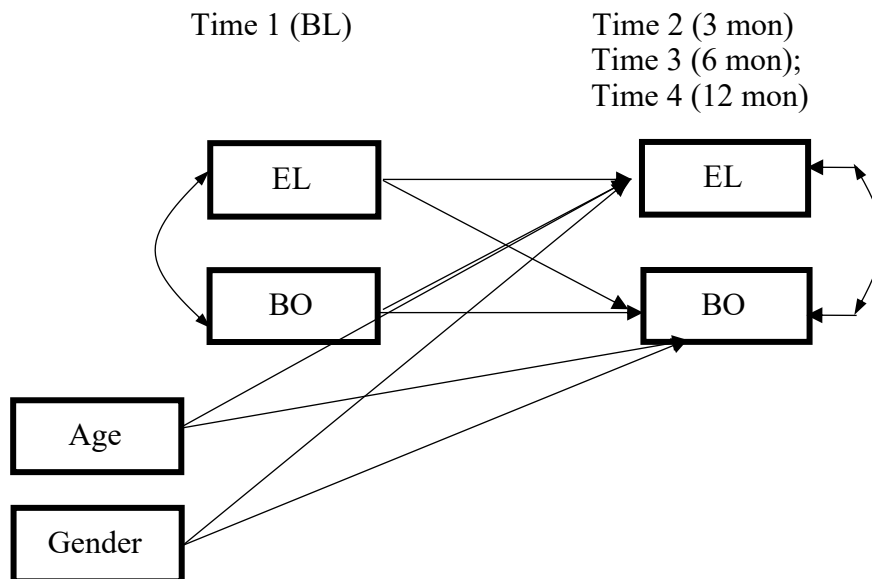


*Figure 2.* Cross-lagged path model with Time 1 (Baseline) Emotional Labor and Burnout predicting Time 2 (3 mon) and Time 3 (6 mon) Emotional Labor and Burnout. *Note:* EL= Emotional Labor; BO= Burnout; BL= Baseline; 3 mon= 3 Months; 6 mon= 6 Months.

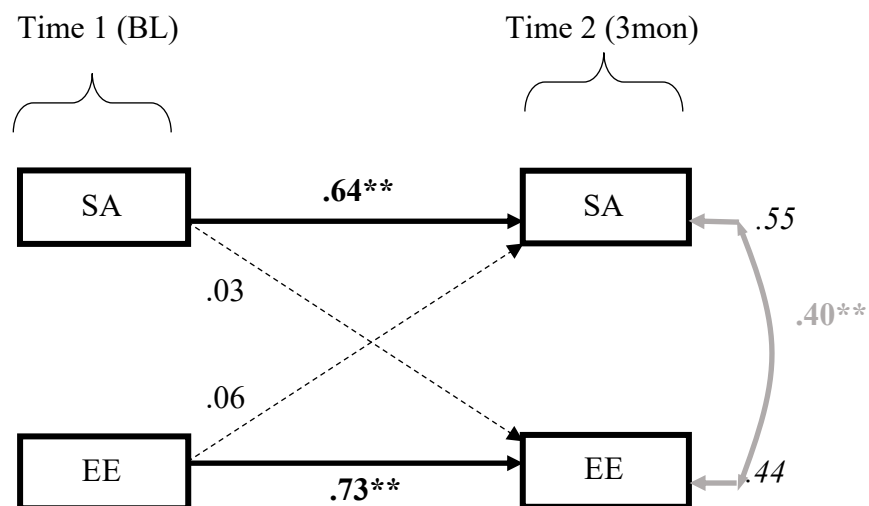




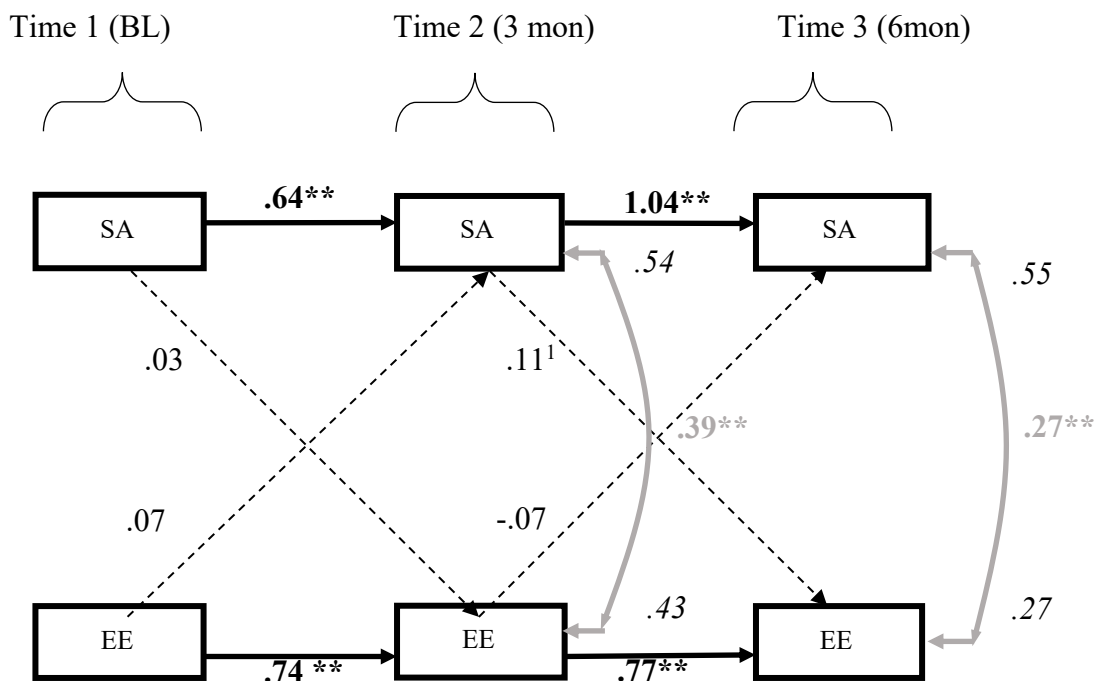
*Figure 3.* Cross-lagged path model with Time 1 (Baseline) Emotional Labor and Burnout predicting Time 2 (3 mon) Emotional Labor and Burnout and Time 3 (6 mon) Emotional Labor and Burnout. *Note:* EL= Emotional Labor. BO= Burnout. BL= Baseline. 3 mon= 3 Months, 6 mon= 6 Months. 12mon= 12 months.



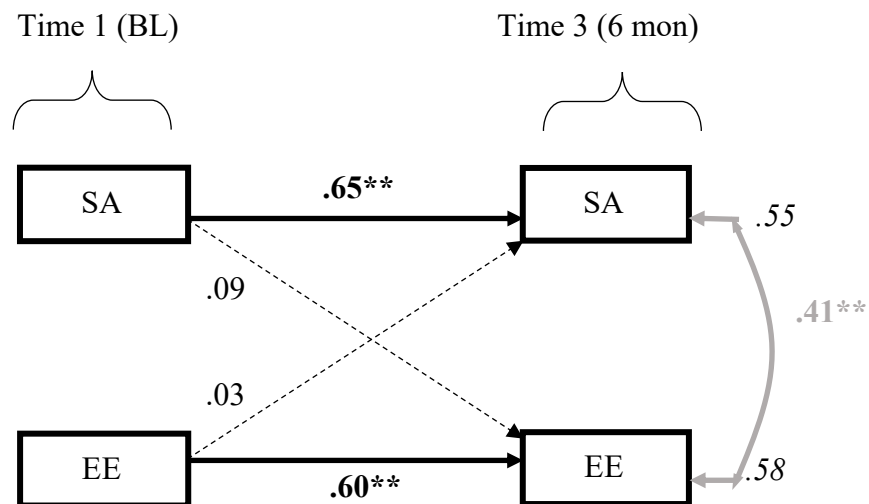
*Figure 4.* Cross-lagged path model with baseline Emotional Labor and Burnout predicting 3 month (or 6 month or 12 month) Emotional Labor and Burnout with the addition of Age and Gender as important covariates. *Note:*  $N=193$ . EL= Emotional Labor; BO= Burnout; BL= Baseline; 3 mon= 3 months; 6 mon= 6 months; 12 mon= 12 months.



*Figure 5.* Cross-lagged path model with baseline Surface Acting and Emotional Exhaustion predicting 3-month Surface Acting and Emotional Exhaustion. *Note:*  $N=193$ . SA= Surface Acting; EE= Emotional Exhaustion; BL= Baseline; 3 mon= 3 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 (BL) Surface Acting and Emotional Exhaustion were freed to correlate. (Zero-order correlations are presented in Table 2).  ${}^1p<.10$ ;  $*p<.05$ ;  $**p<.01$ .



*Figure 6.* Cross-lagged path model with baseline Surface Acting and Emotional Exhaustion predicting 3 month and 6-month Surface Acting and Emotional Exhaustion. *Note:*  $N=193$ . SA= Surface Acting; EE= Emotional Exhaustion; BL= Baseline; 3 mon= 3 months; 6 mon= 6 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italicized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 (BL) Surface Acting and Emotional Exhaustion were freed to correlate. Residuals were freed to correlate with adjacent timepoints. (Zero-order correlations are presented in Table 2). Fit indices are presented in Table 6.  $^{\dagger}p<.10$ ;  $*p<.05$ ;  $**p<.01$ .



*Figure 7.* Cross-lagged path model with baseline Surface Acting and Emotional Exhaustion predicting 6-month Surface Acting and Emotional Exhaustion. *Note:*  $N=193$ . SA= Surface Acting; EE= Emotional Exhaustion; BL= Baseline; 6 mon= 6 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 (BL) Surface Acting and Emotional Exhaustion were freed to correlate. (Zero-order correlations are presented in Table 2). <sup>1</sup> $p<.10$ ; \* $p<.05$ ; \*\* $p<.01$ .

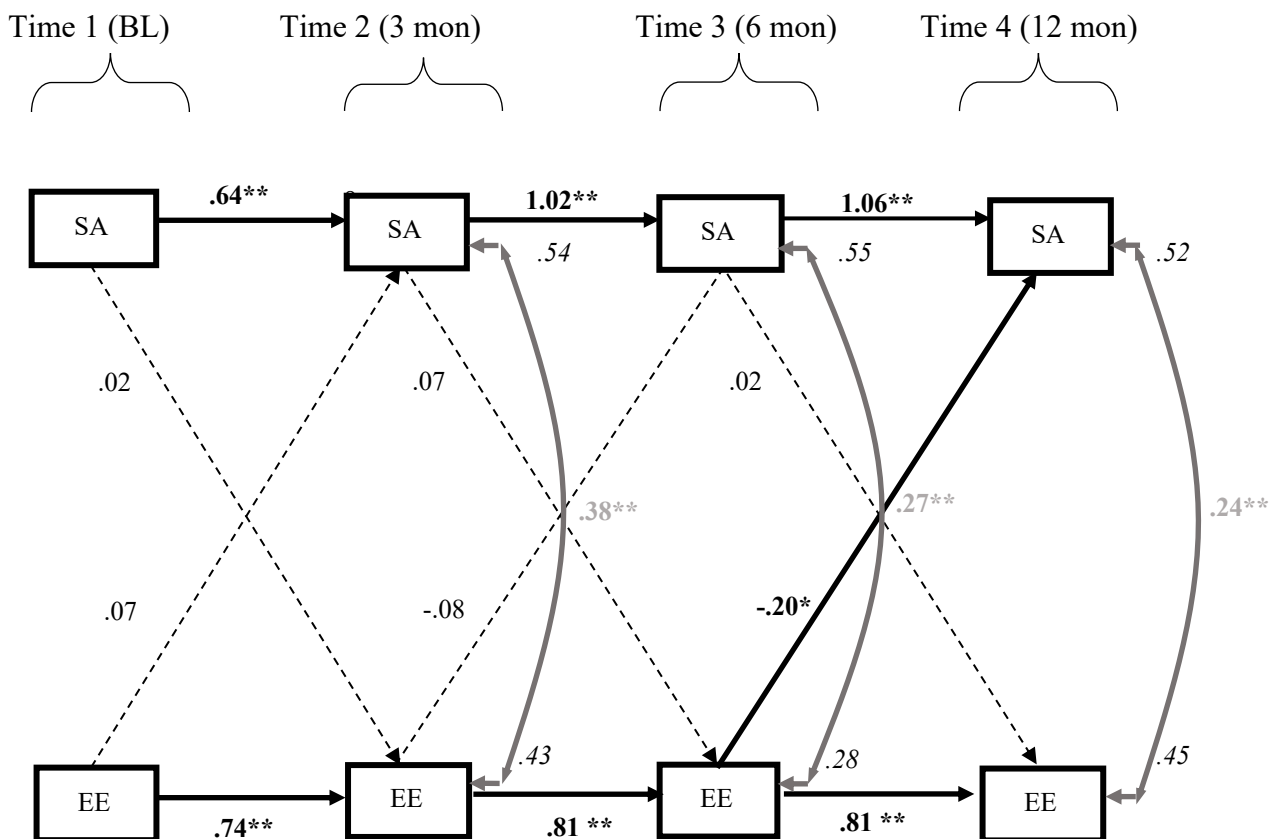
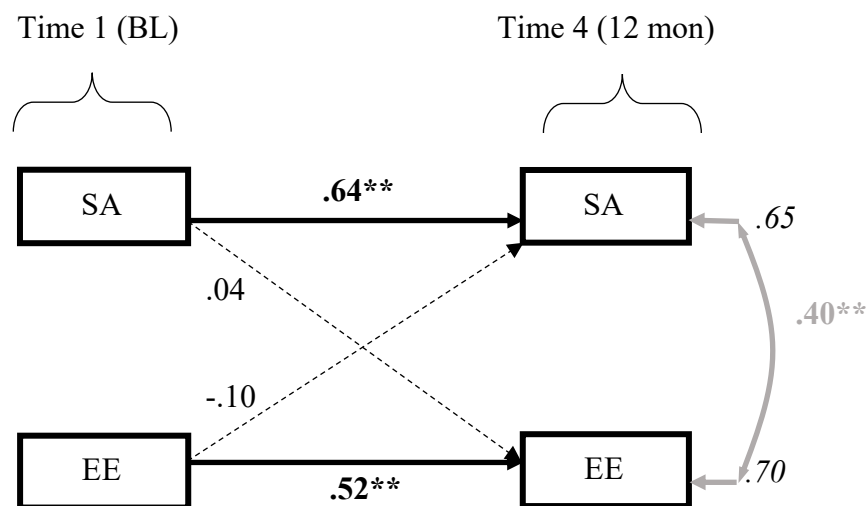
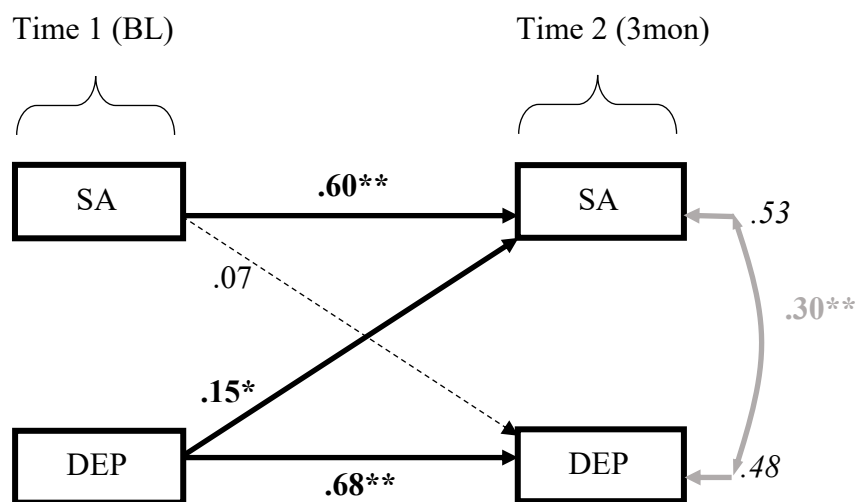


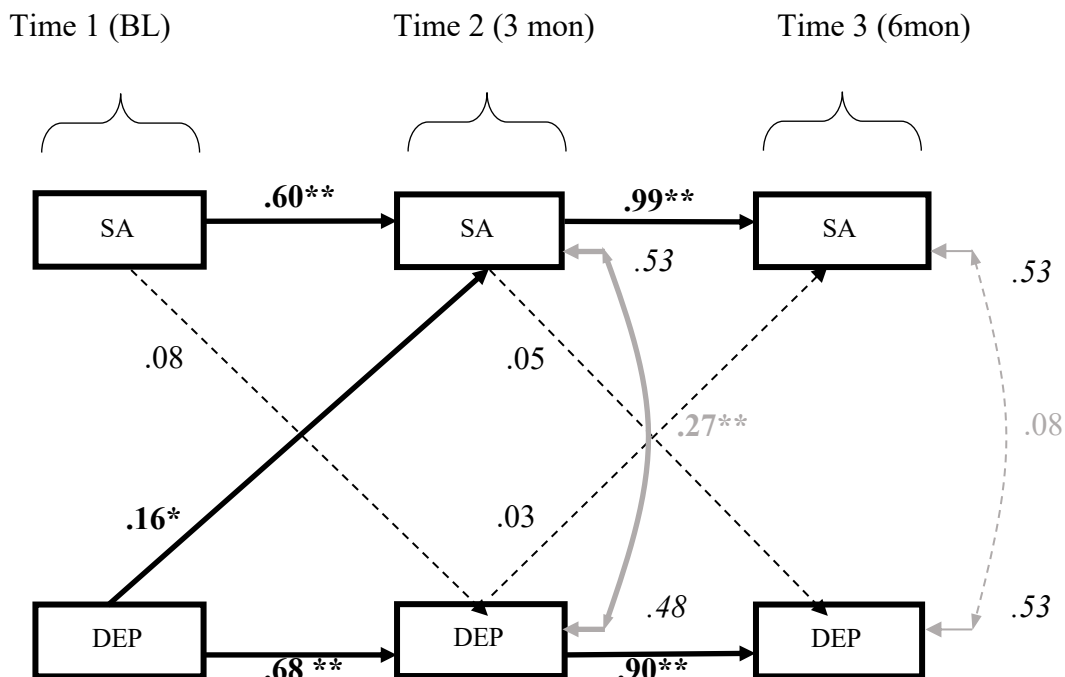
Figure 8. Cross-lagged path model with baseline Surface Acting and Emotional Exhaustion predicting 3-month, 6 month, and 12-month Surface Acting and Emotional Exhaustion. Note:  $N=193$ . SA= Surface Acting; EE= Emotional Exhaustion; BL= Baseline; 3 mon= 3 months; 6 mon= 6 months; 12 mon= 12 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italicized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 Surface Acting and Emotional Exhaustion were freed to correlate. Residuals were freed to correlate with adjacent timepoints. (Zero-order correlations are presented in Table 2). Fit indices are presented in Table 6.  $^1p<.10$ ;  $^*p<.05$ ;  $^{**}p<.01$ .



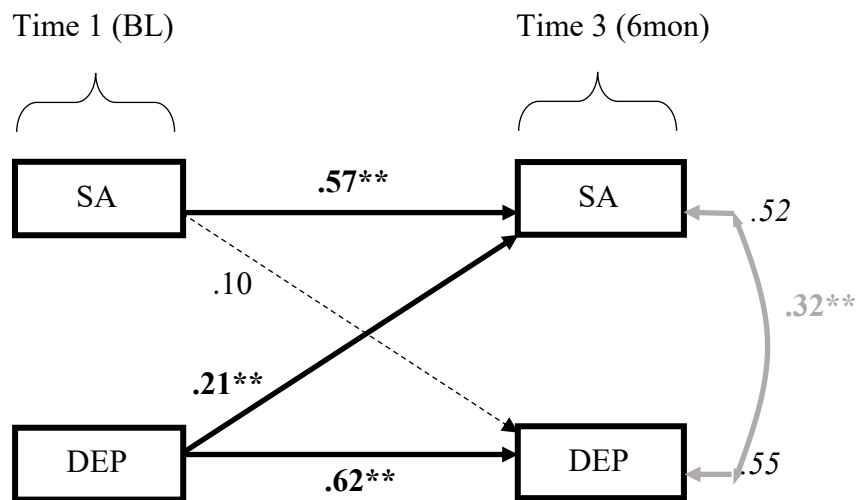
*Figure 9.* Cross-lagged path model with baseline Surface Acting and Emotional Exhaustion predicting 12-month Surface Acting and Emotional Exhaustion. *Note:*  $N=193$ . SA= Surface Acting; EE= Emotional Exhaustion; BL= Baseline; 12 mon= 12 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italicized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 (BL) Surface Acting and Emotional Exhaustion were freed to correlate. (Zero-order correlations are presented in Table 2).  $^1p<.10$ ;  $^*p<.05$ ;  $^{**}p<.01$ .



*Figure 10.* Cross-lagged path model with baseline Surface Acting and Depersonalization predicting 3-month Surface Acting and Depersonalization. *Note:*  $N=193$ . SA= Surface Acting; DEP= Depersonalization; BL= Baseline; 3 mon= 3 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italicized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 (BL) Surface Acting and Depersonalization were freed to correlate. (Zero-order correlations are presented in Table 2).  $^1p<.10$ ;  $^*p<.05$ ;  $^{**}p<.01$ .



*Figure 11.* Cross-lagged path model with baseline Surface Acting and Depersonalization predicting 3 month and 6 month Surface Acting and Depersonalization. *Note:*  $N=193$ . SA= Surface Acting; DEP= Depersonalization; BL= Baseline; 3 mon= 3 months; 6 mon= 6 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 (BL) Surface Acting and Depersonalization were freed to correlate. Residuals were freed to correlate with adjacent timepoints. (Zero-order correlations are presented in Table 2). Fit indices are presented in Table 6. <sup>1</sup> $p<.10$ ; \* $p<.05$ ; \*\* $p<.01$ .



*Figure 12.* Cross-lagged path model with baseline Surface Acting and Depersonalization predicting 6-month Surface Acting and Depersonalization. *Note:*  $N=193$ . SA= Surface Acting; DEP= Depersonalization; BL= Baseline; 6 mon= 6 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italicized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 (BL) Surface Acting and Depersonalization were freed to correlate. (Zero-order correlations are presented in Table 2). <sup>1</sup> $p<.10$ ; \* $p<.05$ ; \*\* $p<.01$ .



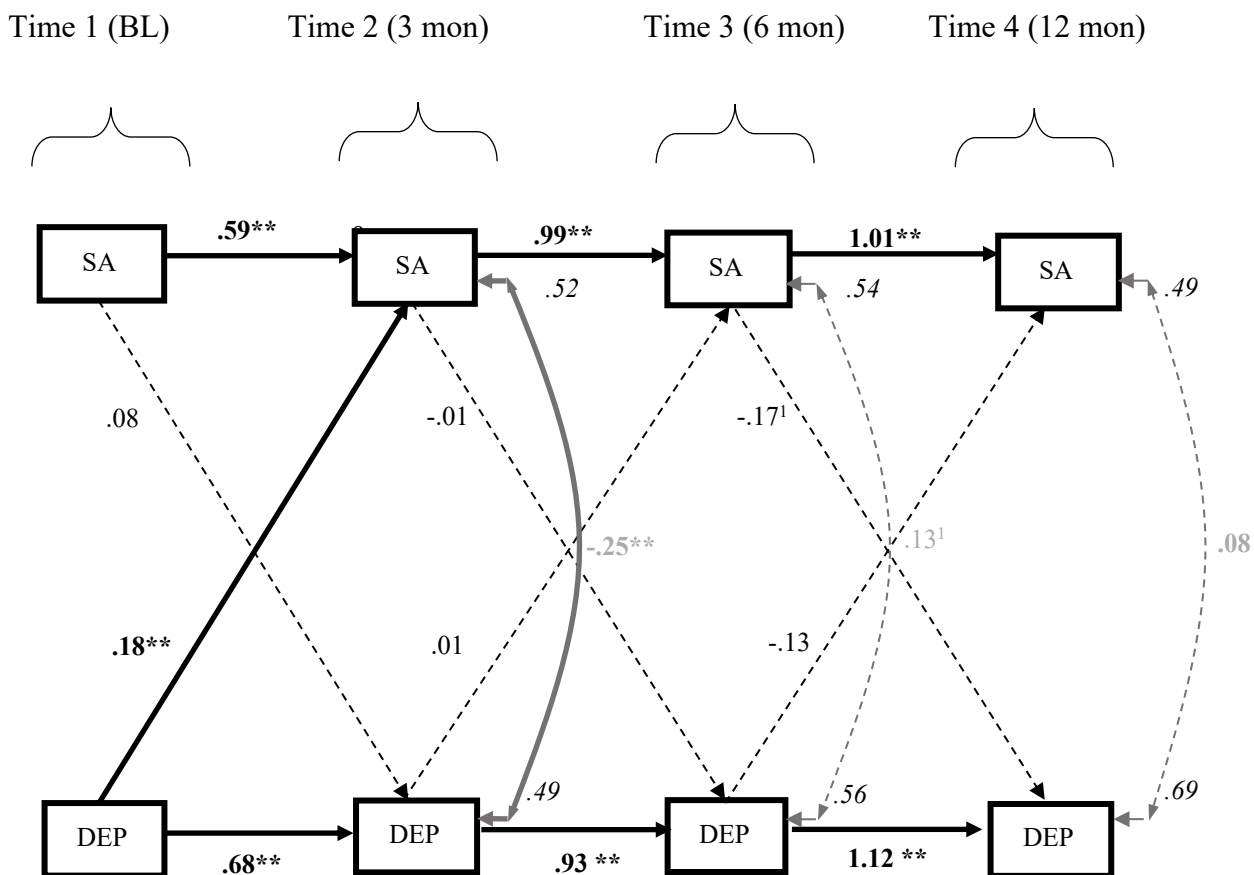


Figure 13. Cross-lagged path model with baseline Surface Acting and Depersonalization predicting 3-month, 6 month, and 12-month Surface Acting and Depersonalization. Note:  $N=193$ . SA= Surface Acting; DEP= Depersonalization; BL= Baseline; 3 mon= 3 months; 6 mon= 6 months; 12 mon= 12 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italicized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 Surface Acting and Depersonalization were freed to correlate. Residuals were freed to correlate with adjacent timepoints. (Zero-order correlations are presented in Table 2). Fit indices are presented in Table 6.  $^{\dagger}p<.10$ ;  $*p<.05$ ;  $**p<.01$ .

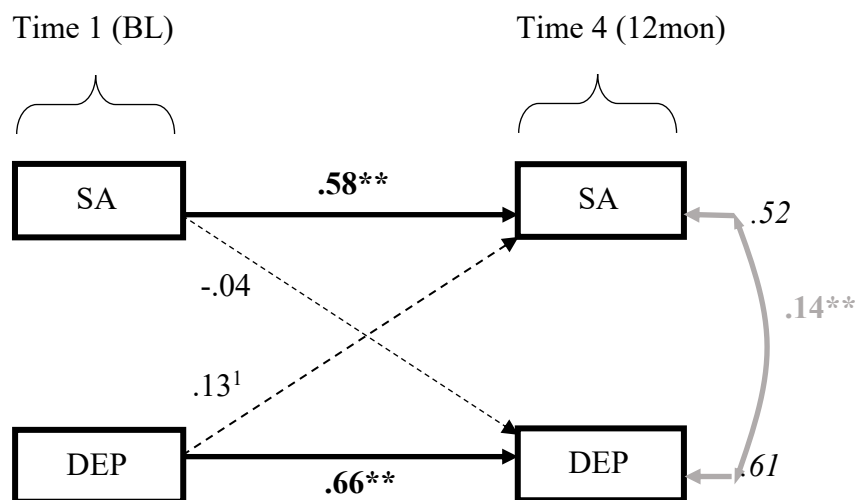


Figure 14. Cross-lagged path model with baseline Surface Acting and Depersonalization predicting 3-month Surface Acting and Depersonalization. Note:  $N=193$ . SA= Surface Acting; DEP= Depersonalization; BL= Baseline; 3 mon= 3 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 (BL) Surface Acting and Depersonalization were freed to correlate. (Zero-order correlations are presented in Table 2). <sup>1</sup> $p<.10$ ; \* $p<.05$ ; \*\* $p<.01$ .

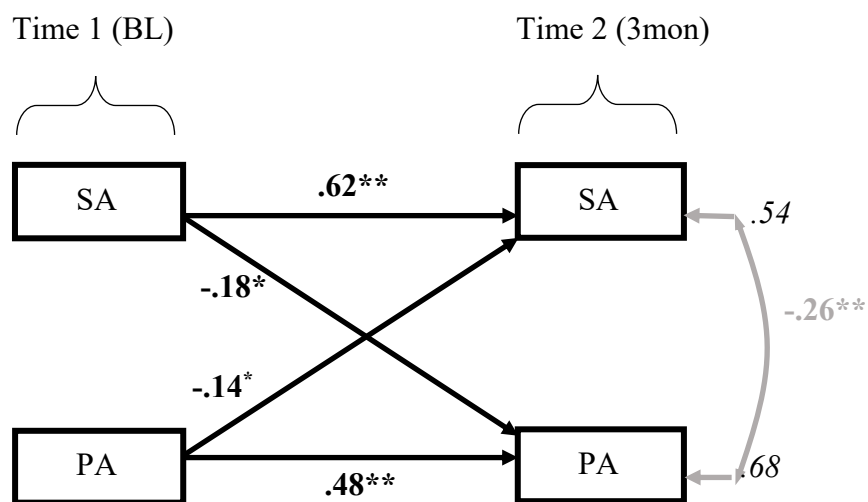
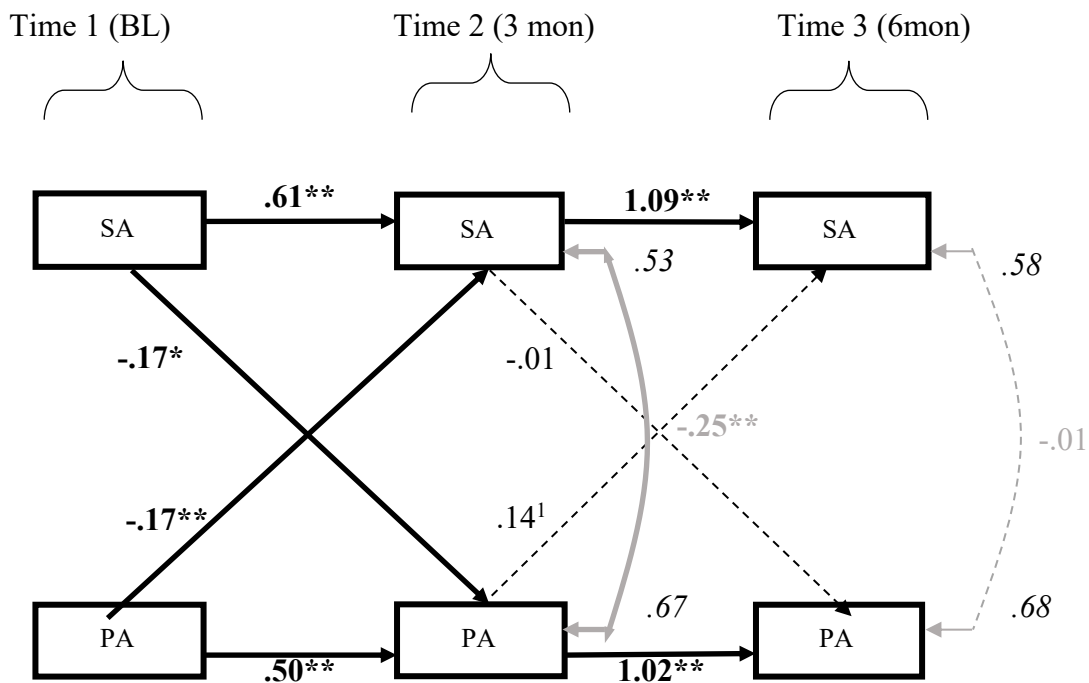
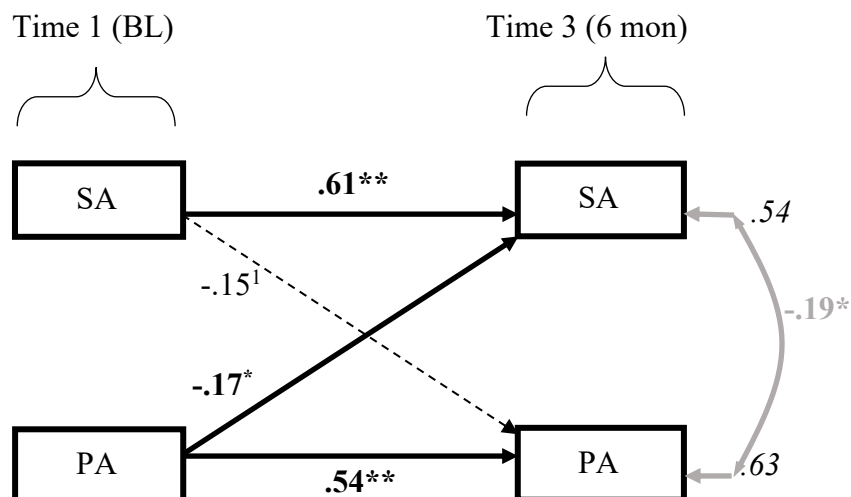


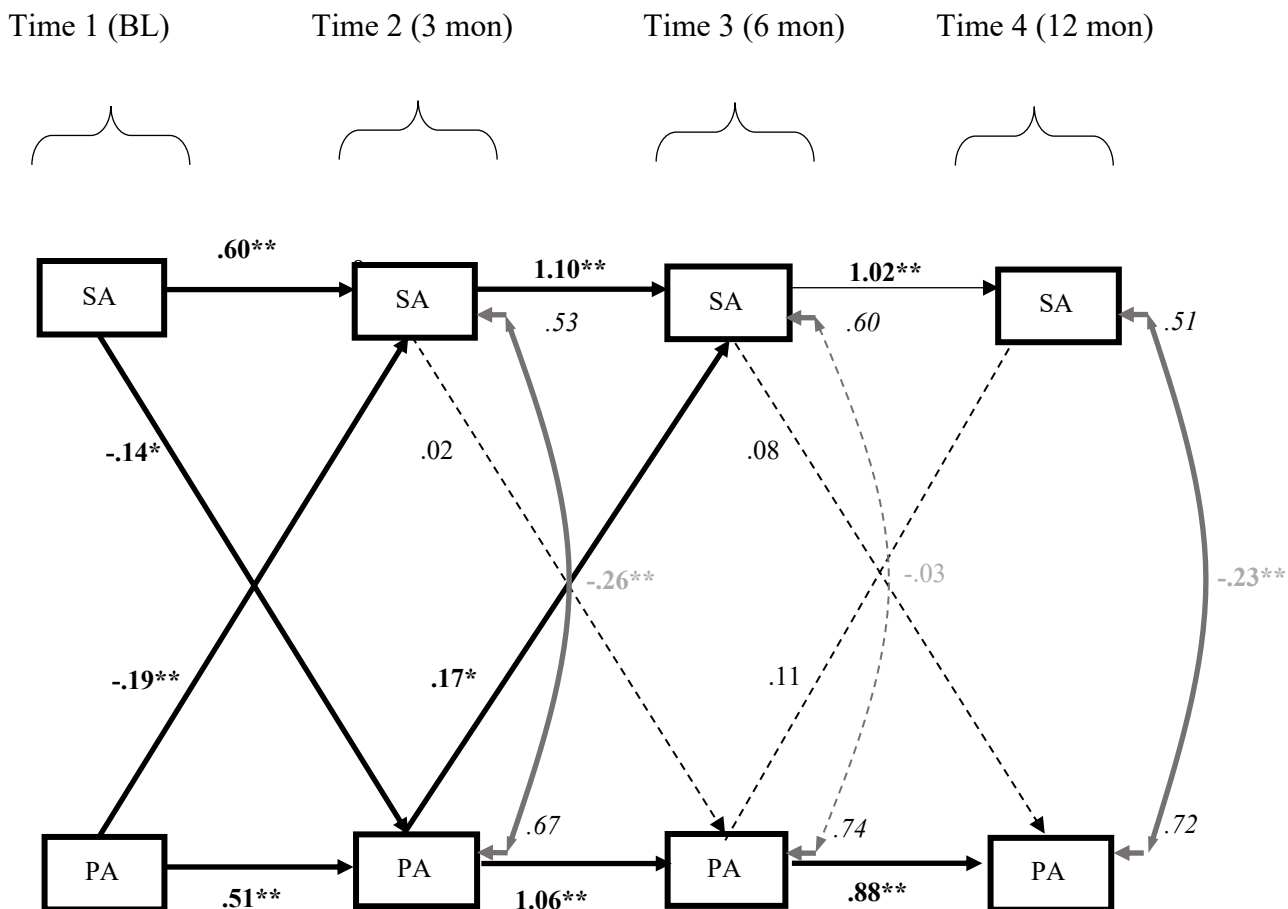
Figure 15. Cross-lagged path model with baseline Surface Acting and Personal Accomplishment predicting 3-month Surface Acting and Personal Accomplishment. Note:  $N=193$ . SA= Surface Acting; PA= Personal Accomplishment; BL= Baseline; 3 mon= 3 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 (BL) Surface Acting and Personal Accomplishment were freed to correlate. (Zero-order correlations are presented in Table 2). <sup>1</sup> $p<.10$ ; \* $p<.05$ ; \*\* $p<.01$ .



*Figure 16.* Cross-lagged path model with baseline Surface Acting and Personal Accomplishment predicting 3 month and 6 Surface Acting and Personal Accomplishment. *Note:*  $N=193$ . SA= Surface Acting; PA= Personal Accomplishment; BL= Baseline; 3 mon= 3 months; 6 mon= 6 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italicized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 (BL) Surface Acting and Personal accomplishment were freed to correlate. Residuals were freed to correlate with adjacent timepoints. (Zero-order correlations are presented in Table 2). Fit indices are presented in Table 6. <sup>1</sup> $p<.10$ ; \* $p<.05$ ; \*\* $p<.01$ .



*Figure 17.* Cross-lagged path model with baseline Surface Acting and Personal Accomplishment predicting 6-month Surface Acting and Personal Accomplishment. *Note:*  $N=193$ . SA= Surface Acting; PA= Personal Accomplishment; BL= Baseline; 6 mon= 6 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italicized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 (BL) Surface Acting and Personal Accomplishment were freed to correlate. (Zero-order correlations are presented in Table 2).  $^1p<.10$ ;  $*p<.05$ ;  $**p<.01$ .



*Figure 18.* Cross-lagged path model with baseline Surface Acting and Personal Accomplishment predicting 3-month, 6-month, and 12-month Surface Acting and Personal Accomplishment. *Note:*  $N=193$ . SA= Surface Acting; PA= Personal Accomplishment; BL= Baseline; 3 mon= 3 months; 6 mon= 6 months; 12 mon= 12 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italicized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 Surface Acting and Personal accomplishment were freed to correlate. Residuals were freed to correlate with adjacent timepoints. (Zero-order correlations are presented in Table 2). Fit indices are presented in Table 6.  $^{\dagger}p<.10$ ;  $*p<.05$ ;  $**p<.01$ .

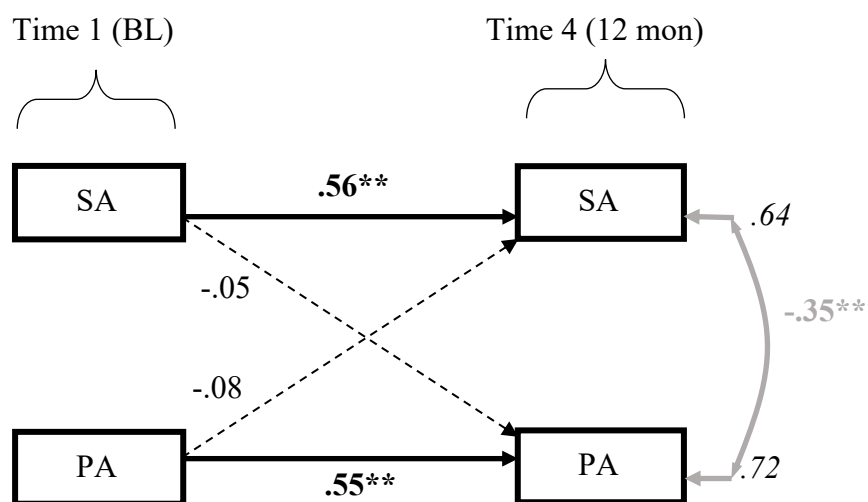


Figure 19. Cross-lagged path model with baseline Surface Acting and Personal Accomplishment predicting 12-month Surface Acting and Personal Accomplishment. *Note:*  $N=193$ . SA= Surface Acting; PA= Personal Accomplishment; BL= Baseline; 12 mon= 12 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italicized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 (BL) Surface Acting and Personal Accomplishment were freed to correlate. (Zero-order correlations are presented in Table 2). <sup>1</sup> $p<.10$ ; \* $p<.05$ ; \*\* $p<.01$ .

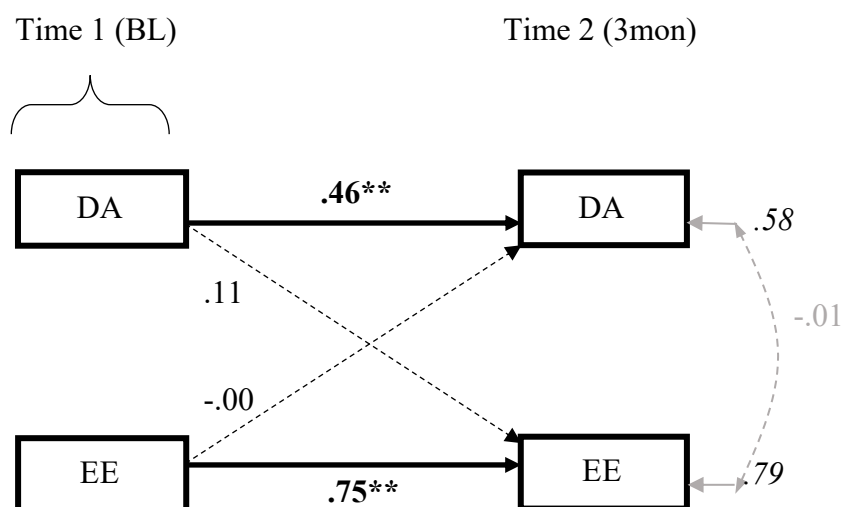
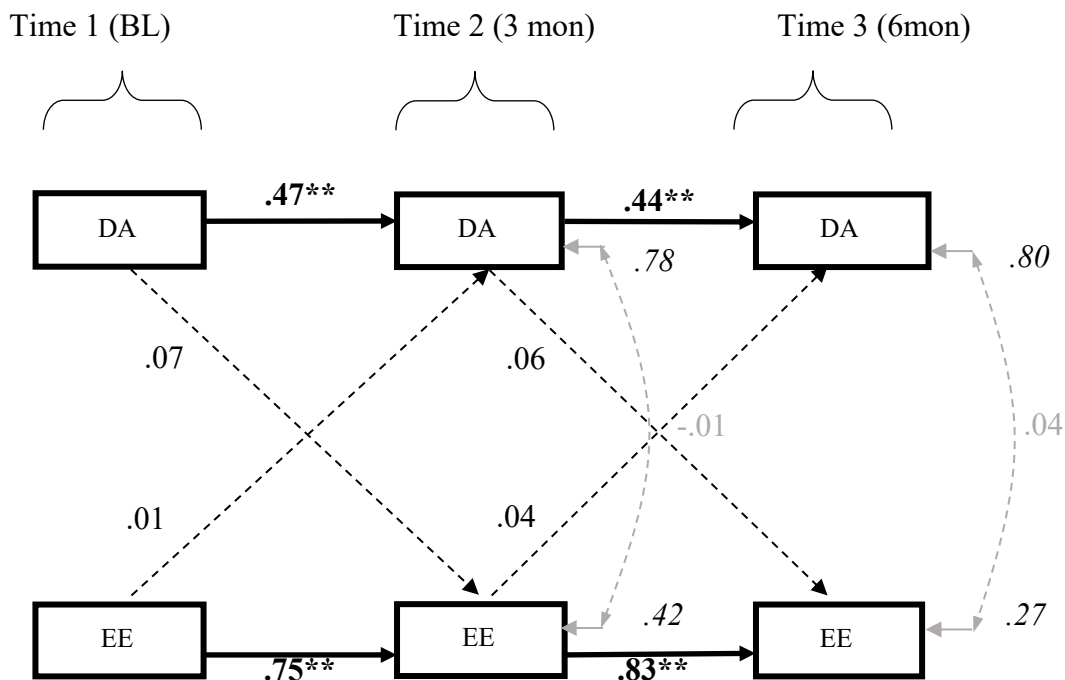
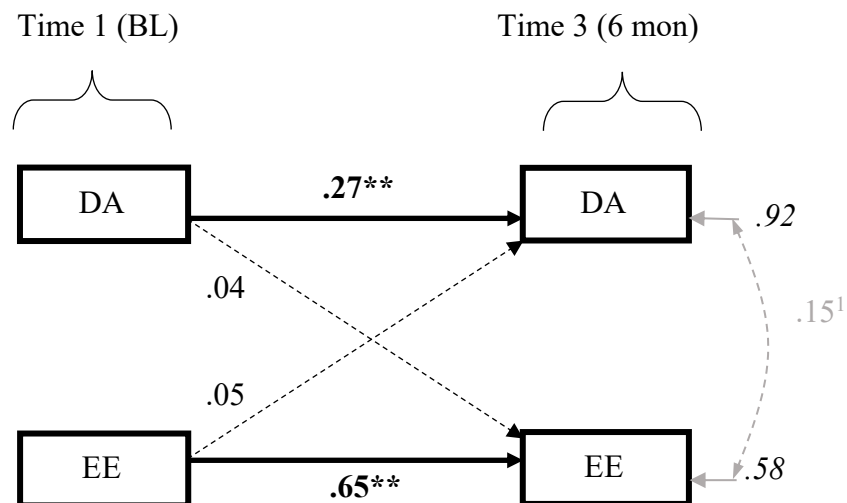


Figure 20. Cross-lagged path model with baseline Deep Acting and Emotional Exhaustion predicting 3-month Deep Acting and Emotional Exhaustion. *Note:*  $N=193$ . DA= Deep Acting; EE= Emotional Exhaustion; BL= Baseline; 3 mon= 3 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italicized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 (BL) Deep Acting and Emotional Exhaustion were freed to correlate. (Zero-order correlations are presented in Table 2). <sup>1</sup> $p<.10$ ; \* $p<.05$ ; \*\* $p<.01$ .

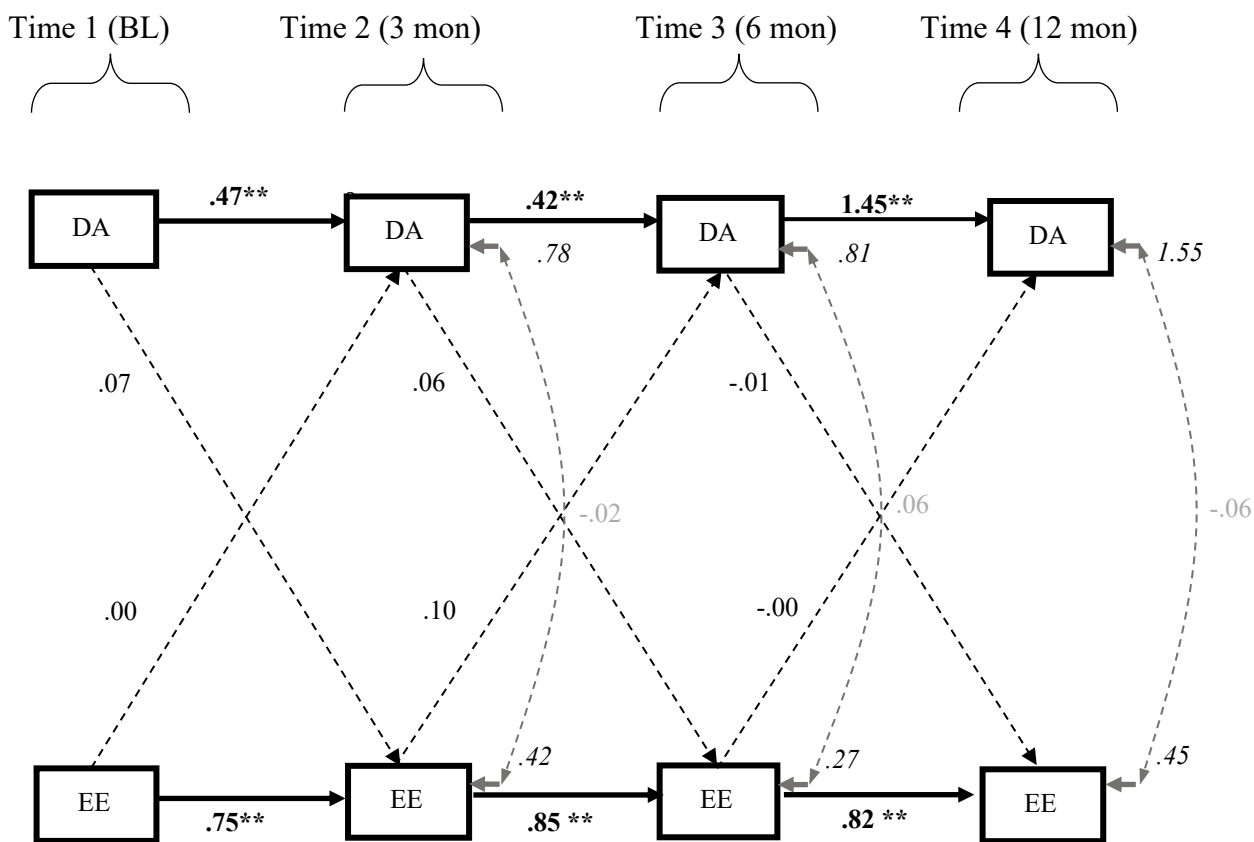


*Figure 21.* Cross-lagged path model with baseline Deep Acting and Emotional Exhaustion predicting 3 month and 6 month Deep Acting and Emotional Exhaustion. *Note:*  $N=193$ . DA= Surface Acting; EE= Emotional Exhaustion; BL= Baseline; 3 mon= 3 months; 6 mon= 6 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italicized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 (BL) Deep Acting and Emotional Exhaustion were freed to correlate. Residuals were freed to correlate with adjacent timepoints. (Zero-order correlations are presented in Table 2). Fit indices are presented in Table 6. <sup>1</sup> $p<.10$ ; \* $p<.05$ ; \*\* $p<.01$ .



*Figure 22.* Cross-lagged path model with baseline Deep Acting and Emotional Exhaustion predicting 6-month Surface Acting and Emotional Exhaustion. *Note:*  $N=193$ . DA= Deep Acting; EE= Emotional Exhaustion; BL= Baseline; 6 mon= 6 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italicized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 (BL) Deep Acting and Emotional Exhaustion were freed to correlate. (Zero-order correlations are presented in Table 2). <sup>1</sup> $p<.10$ ; \* $p<.05$ ; \*\* $p<.01$ .





*Figure 23.* Cross-lagged path model with baseline Deep Acting and Emotional Exhaustion predicting 3-month, 6 month, and 12-month Deep Acting and Emotional Exhaustion. *Note:*  $N=193$ . DA= Deep Acting; EE= Emotional Exhaustion; BL= Baseline; 3 mon= 3 months; 6 mon= 6 months; 12 mon= 12 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 Deep Acting and Emotional Exhaustion were freed to correlate. Residuals were freed to correlate with adjacent timepoints. (Zero-order correlations are presented in Table 2). Fit indices are presented in Table 6.  $^{\dagger}p<.10$ ;  $*p<.05$ ;  $**p<.01$ .

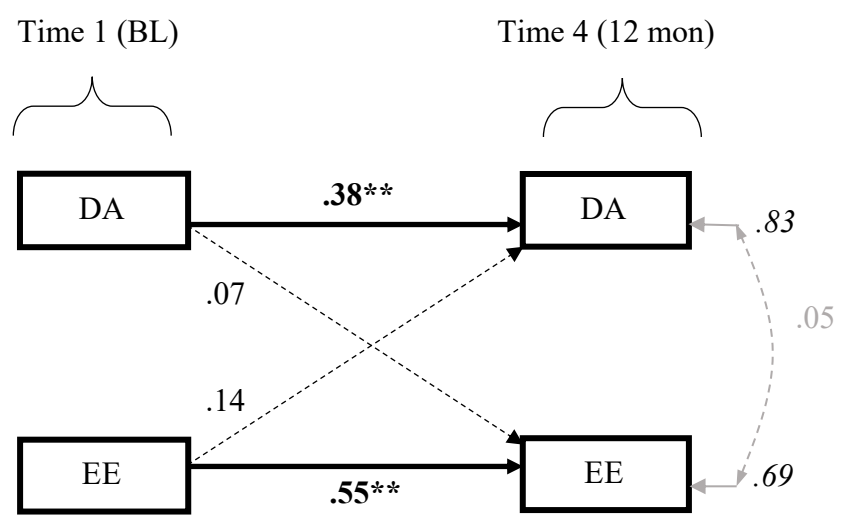


Figure 24. Cross-lagged path model with baseline Deep Acting and Emotional Exhaustion predicting 12-month Deep Acting and Emotional Exhaustion. Note:  $N=193$ . DA= Deep Acting; EE= Emotional Exhaustion; BL= Baseline; 12 mon= 12 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italicized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 (BL) Deep Acting and Emotional Exhaustion were freed to correlate. (Zero-order correlations are presented in Table 2).  ${}^1p<.10$ ;  ${}^*p<.05$ ;  ${}^{**}p<.01$ .

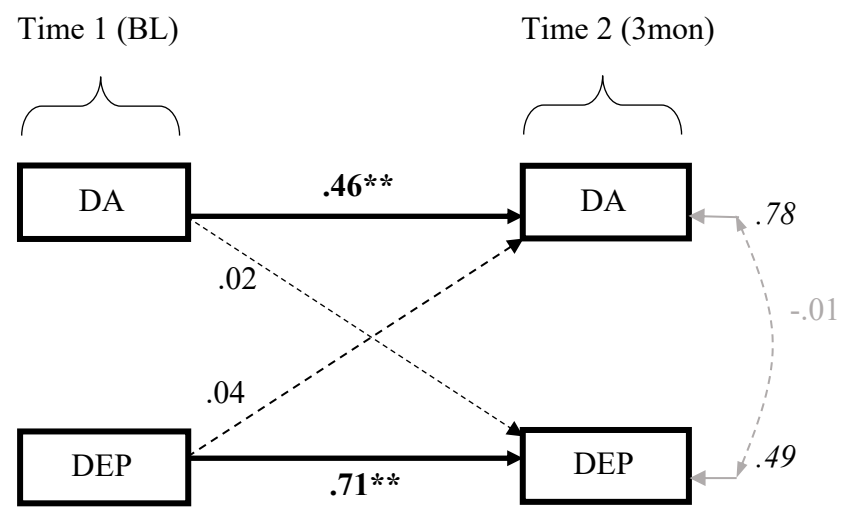


Figure 25. Cross-lagged path model with baseline Deep Acting and Depersonalization predicting 3-month Deep Acting and Depersonalization. Note:  $N=193$ . DA= Deep Acting; DEP= Depersonalization; BL= Baseline; 3 mon= 3 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italicized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 (BL) Deep Acting and Depersonalization were freed to correlate. (Zero-order correlations are presented in Table 2).  ${}^1p<.10$ ;  ${}^*p<.05$ ;  ${}^{**}p<.01$ .

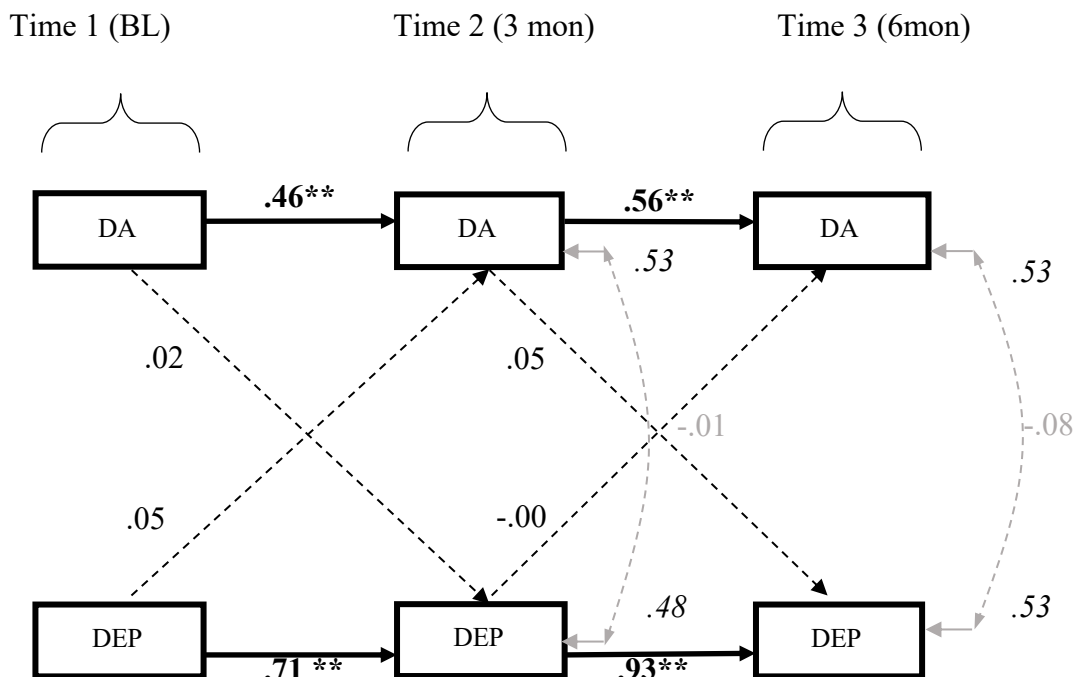
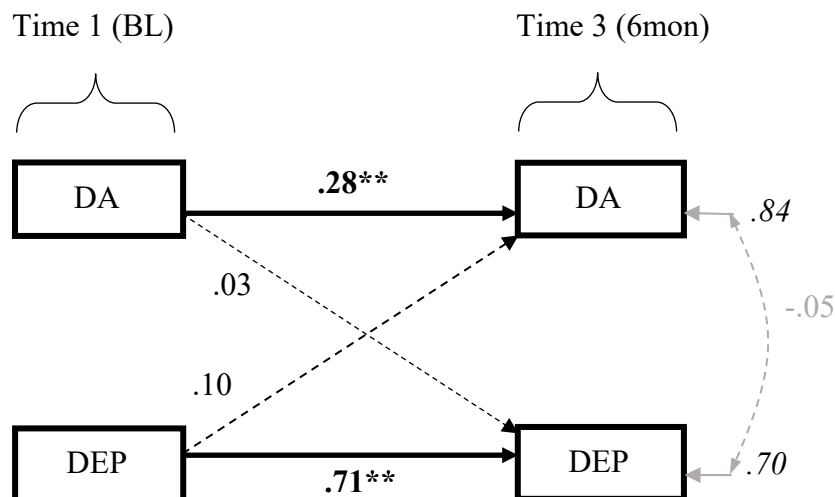


Figure 26. Cross-lagged path model with baseline Deep Acting and Depersonalization predicting 3 month and 6 month Deep Acting and Depersonalization. Note:  $N=193$ . DA= Deep Acting; DEP= Depersonalization; BL= Baseline; 3 mon= 3 months; 6 mon= 6 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italicized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 (BL) Deep Acting and Depersonalization were freed to correlate. Residuals were freed to correlate with adjacent timepoints. (Zero-order correlations are presented in Table 2). Fit indices are presented in Table 6.  $^{\dagger}p<.10$ ;  $*p<.05$ ;  $**p<.01$ .



*Figure 27.* Cross-lagged path model with baseline Deep Acting and Depersonalization predicting 6-month Deep Acting and Depersonalization. *Note:*  $N=193$ . DA= Deep Acting; DEP= Depersonalization; BL= Baseline; 6 mon= 6 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italicized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 (BL) Deep Acting and Depersonalization were freed to correlate. (Zero-order correlations are presented in Table 2).  $^1p<.10$ ;  $*p<.05$ ;  $**p<.01$ .

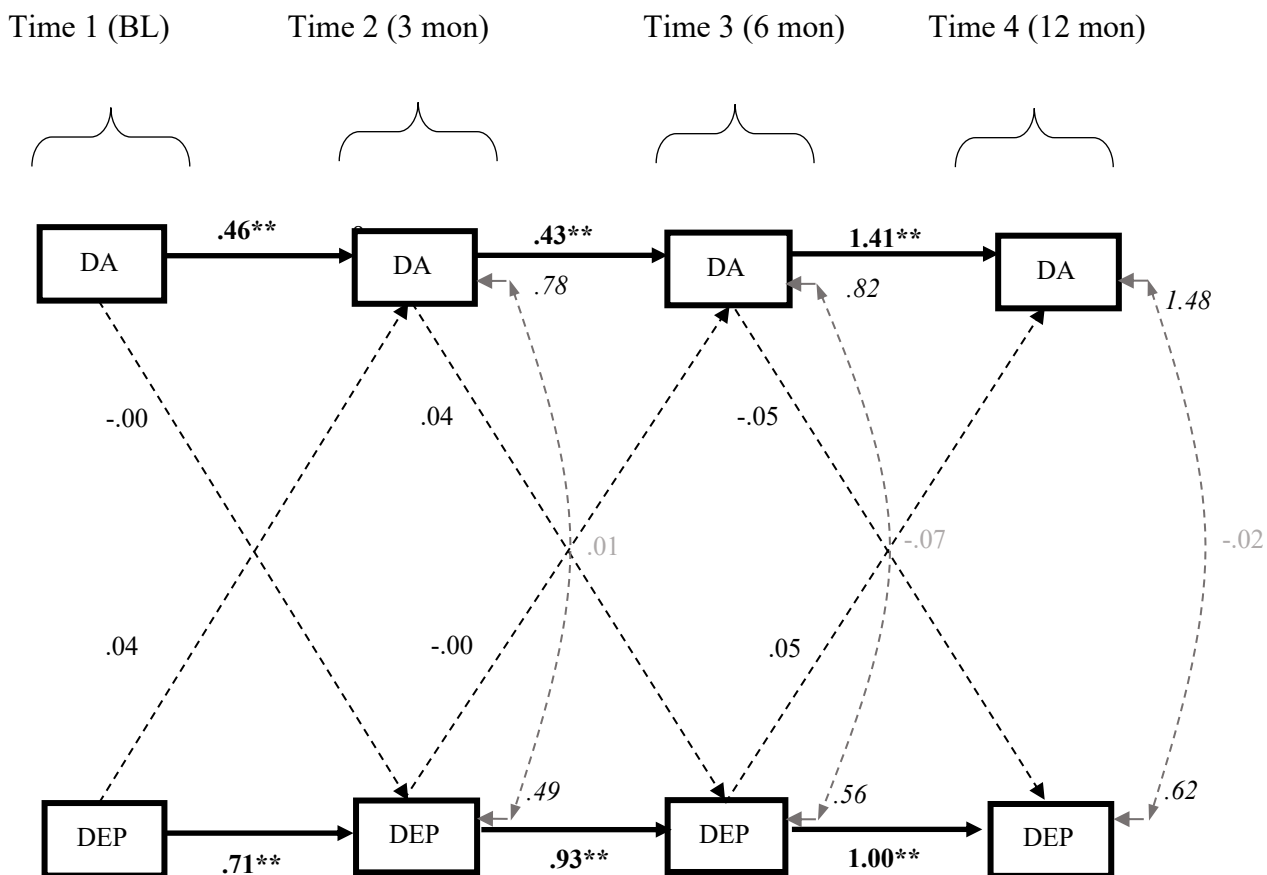


Figure 28. Cross-lagged path model with baseline Deep Acting and Depersonalization predicting 3-month, 6 month, and 12-month Deep Acting and Depersonalization. Note:  $N=193$ . DA= Deep Acting; DEP= Depersonalization; BL= Baseline; 3 mon= 3 months; 6 mon= 6 months; 12 mon= 12 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italicized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 Deep Acting and Depersonalization were freed to correlate. Residuals were freed to correlate with adjacent timepoints. (Zero-order correlations are presented in Table 2). Fit indices are presented in Table 6.  $^1p<.10$ ;  $*p<.05$ ;  $**p<.01$ .

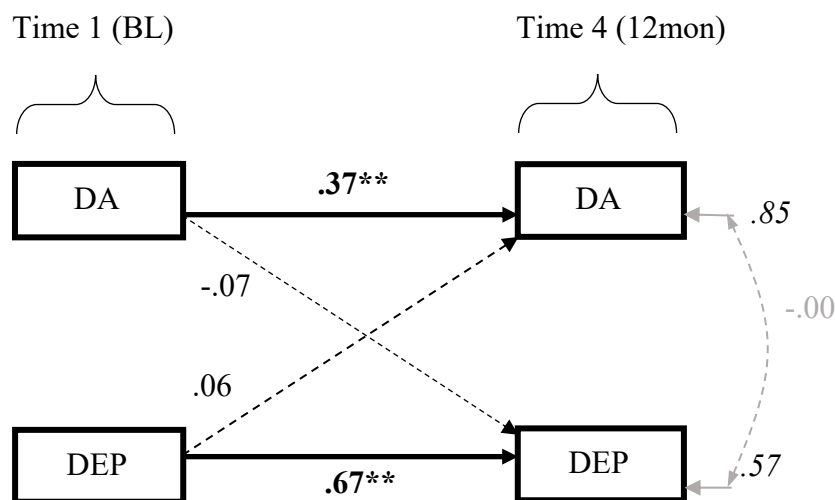


Figure 29. Cross-lagged path model with baseline Deep Acting and Depersonalization predicting 3 month Surface Acting and Depersonalization. Note:  $N=193$ . DA= Deep Acting; DEP= Depersonalization; BL= Baseline; 3 mon= 3 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italicized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 (BL) Deep Acting and Depersonalization were freed to correlate. (Zero-order correlations are presented in Table 2).  ${}^1p<.10$ ;  $*p<.05$ ;  $**p<.01$ .

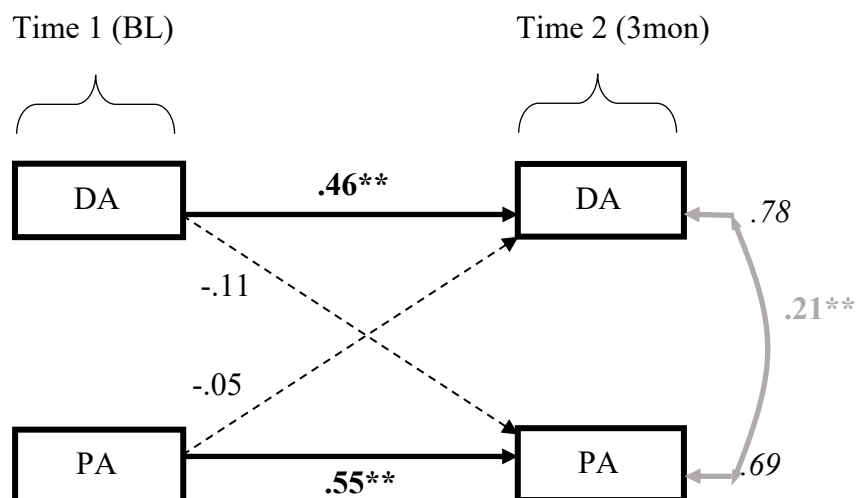
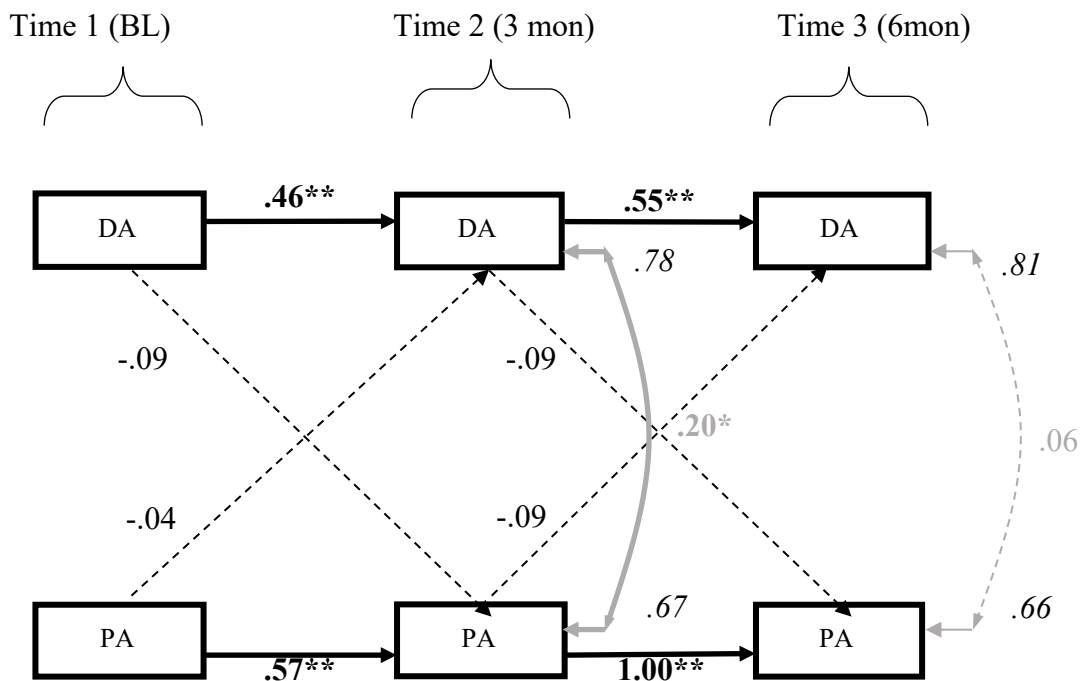
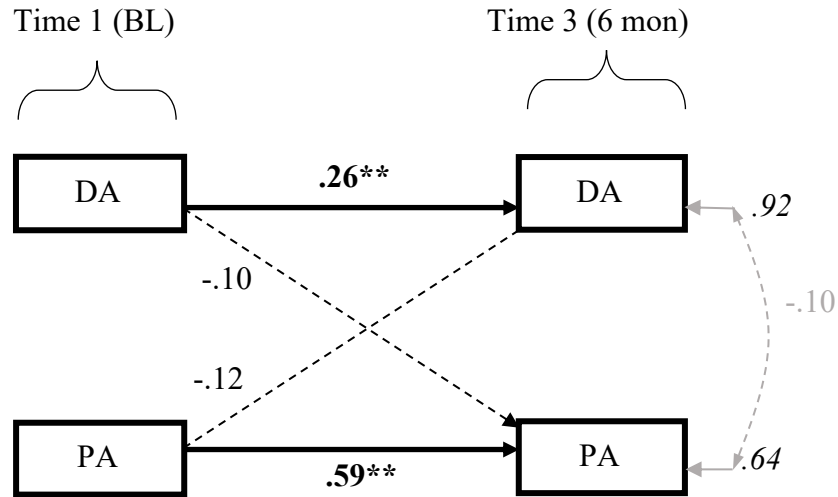


Figure 30. Cross-lagged path model with baseline Deep Acting and Personal Accomplishment predicting 3-month Deep Acting and Personal Accomplishment. Note:  $N=193$ . DA= Deep Acting; PA= Personal Accomplishment; BL= Baseline; 3 mon= 3 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italicized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 (BL) Deep Acting and Personal Accomplishment were freed to correlate. (Zero-order correlations are presented in Table 2).  ${}^1p<.10$ ;  $*p<.05$ ;  $**p<.01$ .

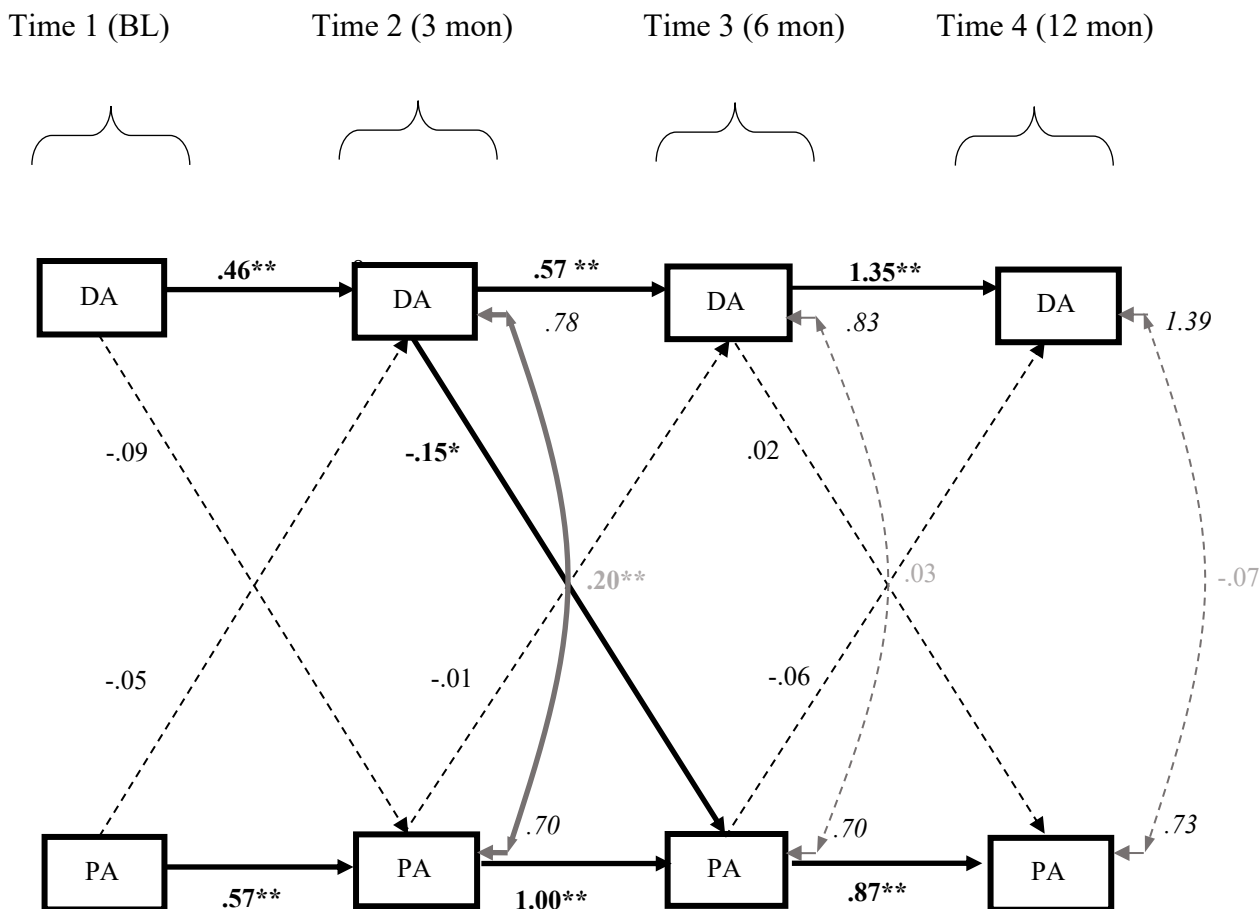


*Figure 31.* Cross-lagged path model with baseline **Deep Acting** and **Personal Accomplishment** predicting 3 month and 6 **Deep Acting** and **Personal Accomplishment**. *Note:*  $N=193$ . DA= **Deep Acting**; PA= **Personal Accomplishment**; BL= Baseline; 3 mon= 3 months; 6 mon= 6 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italicized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 (BL) **Deep Acting** and **Personal accomplishment** were freed to correlate. Residuals were freed to correlate with adjacent timepoints. (Zero-order correlations are presented in Table 2). Fit indices are presented in Table 6. <sup>1</sup> $p<.10$ ; \* $p<.05$ ; \*\* $p<.01$ .



*Figure 32.* Cross-lagged path model with baseline Deep Acting and Personal Accomplishment predicting 6-month Deep Acting and Personal Accomplishment. *Note:*  $N=193$ . DA= Deep Acting; PA= Personal Accomplishment; BL= Baseline; 6 mon= 6 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 (BL) Deep Acting and Personal Accomplishment were freed to correlate. (Zero-order correlations are presented in Table 2).  $^1p<.10$ ;  $*p<.05$ ;  $**p<.01$ .





*Figure 33.* Cross-lagged path model with baseline Deep Acting and Personal Accomplishment predicting 3-month, 6 month, and 12-month Deep Acting and Personal Accomplishment. *Note:*  $N=193$ . DA= Deep Acting; PA= Personal Accomplishment; BL= Baseline; 3 mon= 3 months; 6 mon= 6 months; 12 mon= 12 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 Deep Acting and Personal accomplishment were freed to correlate. Residuals were freed to correlate with adjacent timepoints. (Zero-order correlations are presented in Table 2). Fit indices are presented in Table 6.  $^1p<.10$ ;  $*p<.05$ ;  $**p<.01$ .

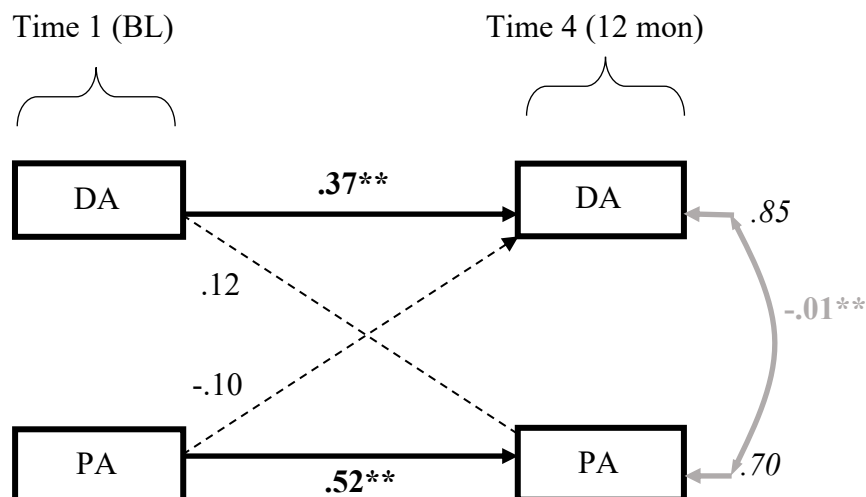


Figure 34. Cross-lagged path model with baseline Deep Acting and Personal Accomplishment predicting 12 month Deep Acting and Personal Accomplishment. *Note:*  $N=193$ . DA= Deep Acting; PA= Personal Accomplishment; BL= Baseline; 12 mon= 12 months. Straight line coefficients represent standardized beta weights. Curved-lines represent correlations between residual variances. Italicized coefficients represent residual (unexplained variance in the dependent variables.) Dashed lines represent non-significant pathways. Time 1 (BL) Deep Acting and Personal Accomplishment were freed to correlate. (Zero-order correlations are presented in Table 2). <sup>1</sup> $p<.10$ ;  $*p<.05$ ;  $**p<.01$ .

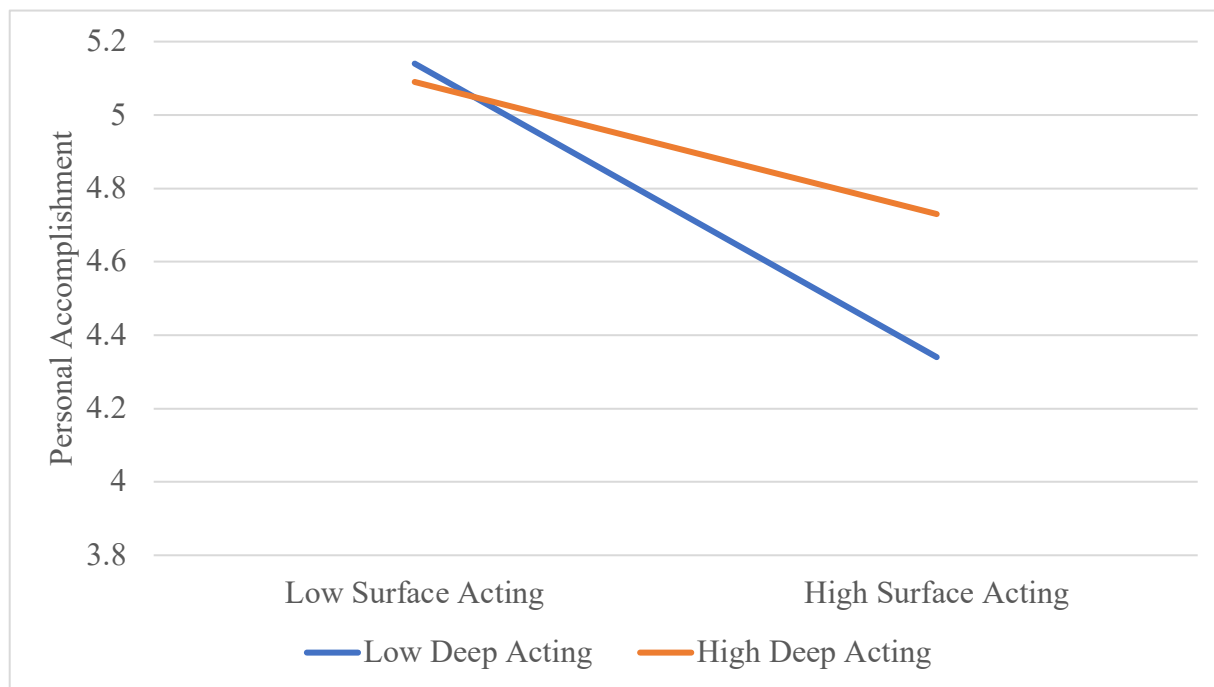


Figure 35. Impact of Surface acting on Personal Accomplishment at High and Low Levels of Deep Acting.